The Influence of Public Health Anti-Obesity Campaigns on Risk Factors for the Development of Eating Disorders.

Miss Claire Alyce Bristow

Bachelor of Nutrition (Honours), Monash University

Bachelor of Health Sciences, Deakin University

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Faculty of Education.

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Abstract

The increasing global prevalence of overweight and obesity is well documented. The undesirable health outcomes associated with these conditions (e.g., increased risk of cardiovascular and metabolic diseases, type 2 diabetes) are also well established. In response, a large, global effort to curb these conditions has ensued. Such efforts include, but are not limited to, weight loss interventions, diet and exercise programs, educational strategies, and public health mass communications. These efforts often encourage weight loss through behaviours such as reduced food intake and strict dieting, which are also key risk factors for the development of eating disorders. Hence, there is increasing concern that such approaches may inadvertently promote risk factors for eating disorders. Eating disorders are significant health issues often characterised by a dangerous and unhealthy pursuit for weight loss, restrictive dieting and compensatory behaviours. Therefore, messages reinforcing these pursuits and promoting an *ideal* weight or body type may be causing harm, particularly to vulnerable audiences. Although the influence of weight loss interventions (and other similar efforts) on risk factors for eating disorders has previously been explored, there is little research on public health anti-obesity campaigns and messages, such as those administered by government or health bodies. As such, this Thesis aimed to explore the influence of anti-obesity public health messages on risk factors for the development of eating disorders using a mixed-methodological approach.

Firstly, through a systematic review of the literature (Study 1), the need for further investigation of the influence of anti-obesity public health campaigns and their associated messages on risk factors for eating disorders was confirmed. This review found that on the whole, studies directly measuring eating disorder risk factors following exposure to campaigns is lacking. This provided the rationale for the second research study (Study 2), whereby participants were exposed to four real-world campaign images via online survey. A

quantitative pre-post design was implemented, in which participants completed outcome measures (e.g., desire to control weight and shape, desire to engage in unhealthy behaviours for weight control) at baseline and immediately after exposure to each image. Psychometric questionnaires also enabled the detection of any particularly vulnerable sub groups of the population. Results from this study found that exposure to campaign images led to a statistically significant increase in multiple risk factors compared to baseline scores. It also highlighted individuals with high eating disorder symptomology and thin internalisation as most susceptible. To explore these findings further, qualitative interviews were conducted with participants currently or previously diagnosed with an eating disorder, the findings of which reiterated concerns campaigns negatively influence this population in particular.

The findings of this Thesis provide further evidence of the potential harms of anti-obesity public health campaigns and messaging on risk factors for eating disorders. As such, recommendations for future campaigns are provided, including shifting focus from weight-based messaging to a more holistic view of health. As the studies included in this Thesis were some of the first to directly measure such outcomes after direct exposure, future research is recommended to further explore these implications.

Declaration

This Thesis is an original work of my research and contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this Thesis contains no material previously published or written by another person, except where due reference is made in the text of the Thesis.

Claire Bristow

Date: 10th January 2022

List of Tables and Figures

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Included in Thesis

Bristow, C., Allen, K.A., Simmonds, J., Snell, T. & McLean, L. (2021) Anti-obesity public health advertisements increase risk factors for the development of eating disorders. *Health Promotion International*. https://doi.org/10.1093/heapro/daab107

Bristow, C., Meurer, C., Simmonds, J., & Snell, T. (2020) Anti-obesity public health messages and risk factors for disordered eating: A systematic review. *Health Promotion International, 36*(6), 1551-1569. https://doi.org/10.1093/heapro/daaa018

Thesis including published works declaration

I hereby declare that this Thesis contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this Thesis contains no material previously published or written by another person, except where due reference is made in the text of the Thesis.

This Thesis includes two original papers published in peer reviewed journals. The ideas, development and writing up of all the papers in the Thesis were the principal responsibility of myself, the student, working within the Faculty of Education under the supervision of Dr Louise McLean, Dr Kelly-Ann Allen, and Dr Janette Simmonds.

My contribution to the published works were as follows:

Thesis chapter	Publication title	Status	Nature and % of student contribution	Co-author name(s): Nature and % contributed
3.2	Anti-obesity public health messages and risk factors for disordered eating: A systematic review.	Published	80%: Conceptualised review question; designed search	*C. Meurer*, 4%: Assisted with screening articles

			strategy & inclusion criteria; screened articles; wrote the draft manuscript & subsequent revisions	& reviewed manuscript draft *J. Simmonds*, 8%: Assisted with the study question and reviewed manuscript draft *T. Snell, 8%*: Assisted with the study question and reviewed manuscript draft
4.2	Anti-obesity public health advertisements increase risk factors for the development of eating disorders.	Published	80%: Conceptualised research study & design; recruited participants; performed statistical analysis; wrote the draft manuscript & subsequent revisions	*K.A Allen*, 3%: Reviewed manuscript draft *J. Simmonds*, 7%: Assisted with the study design & reviewed manuscript *T. Snell, 3%*: Assisted with the study design *L. McLean*, 7%: Assisted with statistical analysis & reviewed manuscript

Claire Bristow

Date: 10th January 2022

I hereby certify that the above declaration correctly reflects the nature and extent of the student's and co-authors' contributions to this work. In instances where I am not the responsible author I have consulted with the responsible author to agree on the respective contributions of the authors.

Main Supervisor name: Louise A. McLean

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Porter, J., **Bristow, C.**, Charlton, K., Tapsell, L., & Choi, T. (2019). Changes in nutrition and dietetic research: A content analysis of the past decade of Dietitians Association of Australia conference abstracts. *Nutrition & Dietetics, 76*(5), 634-641. https://doi.org/10.1111/1747-0080.12563

Tirlea, L., Bonham, M., Dordevic, A., **Bristow, C.**, Day, K., Brennan, L., Haines, T.P, & Murray, M. (2019). Measuring self-esteem changes in children and adolescents affected by overweight or obesity: A scoping review of instruments currently used in multicomponent weight-management interventions. *Childhood Obesity*, *15*(8):485-501. https://doi.org/10.1089/chi.2019.0058

Truby, H., Edwards, B.A., O'Driscoll, D.M., Young, A., Ghazi, L., **Bristow, C.**, Roem, K., Bonham, M.P., Murgia, C., Day, K., Haines, T.P., & Hamilton, G.S. (2019). The Sleeping Well Trial: Increasing the effectiveness of treatment with continuous positive airway pressure (CPAP) using a weight management program in overweight adults with obstructive sleep apnoea: A stepped wedge randomised trial protocol. *Nutrition & Dietetics, 76*(1), 110-117. https://doi.org/10.1111/1747-0080

List of Abbreviations

AIDS: Acquired immunodeficiency syndrome

AN: Anorexia nervosa

BDD: Body dysmorphic disorder

BED: Binge eating disorder

BMI: Body mass index

BN: Bulimia nervosa

COVID-19: Coronavirus disease 2019

CVD: Cardiovascular disease

DSM: Diagnostic and Statistical Manual of Mental Disorders

ED: Eating disorder(s)

EDE-Q: Eating Disorder Examination Questionnaire

HAES®: Health at Every Size

HIV: Human immunodeficiency virus

HPI: Health Promotion International

IPA: Interpretative Phenomenological Analysis

kcal: kilocalorie

kJ: kilojoule

MeSH: Medical subject headings

MMAT: Mixed Methods Appraisal Tool

MMR: Mixed methods research

NEDC: National Eating Disorders Collaboration

NHMRC: National Health and Medical Research Council

OECD: The Organisation for Economic Co-operation and Development

OSFED: Other specified feeding or eating disorders

PHM: Public health message(s)

Q1: Quartile 1

Q2: Quartile 2

SATAQ: Sociocultural Attitudes Towards Appearance Scale

SC: Shape control

SES: Socio-economic status

SLR: Systematic literature review

SS: Shape satisfaction

U.K.: United Kingdom

U.S.: United States

USD: United States Dollars

UWCB: Unhealthy weight control behaviours

VAS: Visual Analogue Scale

WA: Western Australia

WC: Weight control

WHO: World Health Organisation

WS: Weight satisfaction

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As with many things in life, milestones such as these would not be possible without a support team backing you every step of the way. First and foremost, I would like to acknowledge my supervisors who guided me along this journey.

Dr Louise McLean: Thank you for stepping in as primary supervisor one year into my candidature. You made the process seamless and what could have been a very stressful situation was stress-free thanks to your willingness to take myself and the project on. Thank you for challenging me and pushing me to try new things (namely statistical)–I have learnt a lot through this process.

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Finally, to my mum, who bought me into this world and continues to keep me sane in it. And to the rest of my family, whom I know aren't exactly sure what it is I actually *do*, but are proud nonetheless. Similarly, to my friends who politely ask how my PhD is going, and

listen eagerly when I am sure I lost them in the first few sentences. Thank you for supporting, caring, and showing interest.

Authors Note

My research journey has been one that is extremely personal. A mission to investigate some of the potential contributors to the debilitating mental illnesses that are eating disorders. To explore how we, as a society, can do better. And overall, to hopefully help prevent the diagnosis of individuals in the future. Anorexia Nervosa tarnished what should have been some of my most memorable experiences in my younger years, and if I can stop even one person experiencing what I did, then it has all been worth it.

It is important to acknowledge my closeness to the research topic and the potential for my own biases to creep in. To the best of my ability, I have attempted to conduct the following research from an impartial standpoint. This has included objectively observing and measuring each outcome and interaction, guidance from supervisors and continual review of written work, as well as practising researcher reflexivity (Section 6.4.1). I truly hope this is evident throughout this Thesis, and that the ongoing personal reflection of my own involvement as the primary researcher have been sufficient enough to do the topic justice.

Additionally, before proceeding through this Thesis, it is important to clarify some of the language and terminology used throughout. In recent times, there has been debate over the use of the terms *overweight* and *obesity* and the stigma surrounding these. In particular, referring to people as *overweight/obese persons*. Instead, there have been recommendations to shift the language to person-first language, i.e. *persons with overweight or obesity* or *persons classified as having overweight or obesity* (Meadows & Daníelsdóttir, 2016). This assists in shifting from the narrative of a person being overweight or obese, and instead acknowledges it as a medical classification rather than an identity. As such, given the stigmatisation surrounding overweight and obesity and the connotations these words can carry, I have endeavoured to remain sensitive to this and describe overweight/obesity as a characteristic rather than identity, i.e. persons with overweight/obesity.

Chapter 1: Introduction

This introductory chapter provides the foundations and context upon which this Thesis dissertation is based. Though broad in nature, it is important to consider the greater social, cultural and environmental influence on the more specific topic at hand. The two main issues involved in this topic, overweight/obesity and eating disorders (EDs), are multifaceted. As such, the multitude of complexities influencing the development and treatment of these conditions is explored. In particular, the ways in which obesity prevention efforts may negatively influence risk factors for disordered eating and the development of EDs is highlighted. Research to date has failed to address this from the perspective of public health promotion and in particular public health campaigning and messaging on a population-based scale. Therefore, this chapter explores the current literature and relevant areas pertaining to each of the health issues, before providing an overview of the Thesis structure and its included chapters.

1.1 Overweight and Obesity–Overview of the Current Climate

Obesity is an increasing public health issue worldwide. Current figures estimate more than 1.9 billion adults and 340 million children are classified as having overweight or obesity (World Health Organisation [WHO], 2020). In Australia, the prevalence of overweight or obesity is approximately 63% in adults, and 27% in children (Australian Institute of Health and Welfare [AIHW], 2017); the 5th highest rates in the world, preceded by The United States, Mexico, New Zealand and Hungary, respectively (Organisation for Economic Co-operation and Development [OECD], 2017). Conversely, Japan and Korea maintain the lowest rates globally (3.7% and 5.3% respectively; OECD, 2017).

There are a multitude of factors that contribute to overweight and obese status (defined as ≥25kg/m^2 for overweight; ≥30 kg/m^2 for obese) including excess energy intake, overconsumption of high fat/high sugar foods, low levels of physical activity, and high

engagement in sedentary behaviours (AIHW, 2017; WHO, 2020). However, factors not within one's control also contribute to the development of these conditions. The *obesogenic environment*—an environment that by virtue of its design (including physical, economic, and political design) encourages behaviours and practices that contribute to obesity—has been deemed a strong contributor to the increasing prevalence of weight related conditions around the world (AIHW, 2017; Jia, 2021). For example, 'food swamps' – geographical regions with a disproportionate and high-density allocation of fast food outlets, are associated with increased rates of obesity (Cooksey-Stowers et al., 2017). Additionally, social determinants of health such as low income and SES, lack of education, and food insecurity can also strongly influence weight status (Bennett et al., 2008; Medvedyuk et al., 2018). Biological and medical-related factors also play a role, including genetics (Fernandez et al., 2012; Froguel & Boutin, 2001; Maes et al., 1997), conditions such as hypothyroidism and polycystic ovary syndrome (Dunn & Turner, 2016; Ollila et al., 2016; Teede et al., 2013; Verma et al., 2008), and some medications (Bretler et al., 2019; Malone, 2005; Virk et al., 2004).

The health consequences of overweight and obesity are well established and include an increased risk of cardiovascular and metabolic diseases, asthma, type 2 diabetes mellitus (T2DM), osteoarthritis, and some cancers (AIHW, 2017; WHO, 2020; Wyatt et al., 2006). This is alongside an estimated cost of $2 trillion to the global economy (Dobbs et al., 2014) and $8.6 billion to the Australian economy (AIHW, 2017).

Given the substantial personal and economic health impact of these conditions, weight-loss efforts have saturated both the public domain and academic literature in recent times. However, the effectiveness of weight-loss efforts is contentious, with research suggesting that weight regain is probable (Blomain et al., 2013; MacLean et al., 2015; Mann et al., 2007; Melby et al., 2017). That is, even when weight loss is initially successful, many dieting

efforts are futile in the long-term (Tomiyama et al., 2013; Tsai & Wadden, 2005). Despite this, participation seems to be increasing, with the global market for weight management growing to an estimated $262.9 billion USD in 2020 (Global Industry Analysts, 2020). Hence, it appears that investment in weight control remains strong, regardless of the number of unsuccessful weight loss efforts. At the same time, another health issue also often associated with dieting and weight control has been increasing in prevalence, known as eating disorders (EDs).

1.2 Eating Disorders

EDs include anorexia nervosa (AN), bulimia nervosa (BN) and binge eating disorder (BED), as well as other specified feeding or eating disorders (OSFED; American Psychiatric Association [APA], 2013). Typically, EDs involve poor body image, restrictive, abnormal and/or extreme weight control practices (starvation, laxative abuse, elimination of food groups), heightened importance of body weight and/or shape, and an intense fear of weight gain (Peckmezian et al., 2017). Unlike most other mental illnesses, EDs also maintain a strong physical component in which significant physical harm may ensue (Peckmezian et al., 2017). This includes, but is not limited to, hypotension, cardiac arrythmia, kidney/heart failure, amenorrhea, osteopenia, and gastric rupture (Hall et al., 1989; Rome & Ammerman, 2003; Watson et al., 2010). Despite their serious psychiatric and physical symptomology, EDs remain largely misunderstood with common public perception of a diet–gone–wrong or an exercise of conceit (Peckmezian et al., 2017).

Given the small number of epidemiological studies and secretive nature of EDs, prevalence can be difficult to determine, though the estimated population prevalence in Australia is over 16% (Hay et al., 2015). The two peak risk periods for developing an ED are early adolescence and late teens (12–14 years, 17–18 years; Peckmezian et al., 2017; Watson et al., 2010). It is estimated that more than one in ten women engage in at least one form of

disordered eating (bingeing, purging, weight loss pills, laxatives), with a lesser number of episodes seen in men (Watson et al., 2010). In adolescents, prevalence is predicted to be as high as ~30% (Sparti et al. 2019). Further, AN and BN are the 8th and 10th leading causes of burden of disease in 15–24–year–old females, with national data showing EDs have increased two-fold from the 1990s to 2000s (Watson et al., 2010). Although females maintain the majority of AN and BN cases, the gender distribution for BED is approximately even (Peckmezian et al., 2017). International prevalence is also significant. In the U.S., the estimated lifetime prevalence for EDs is >14% in men and >19% in women (Ward et al., 2019). A U.K. study on women at mid-life found a prevalence of 15.3% (Micali et al., 2017). Additionally, although prevalence is higher in Western countries, rates in non-Western countries appear to be increasing (Hoek, 2016; Pike et al., 2014).

The complexity of EDs makes them notoriously difficult to identify and subsequently treat. As well as their physical symptoms, EDs can have severe implications for mental health. Between 55–97% of persons diagnosed with an ED present with at least one other psychiatric condition, with 45–86% having comorbid depression and 64% comorbid anxiety disorders (Kaye et al., 2004; O'Brien & Vincent, 2003; Peckmezian et al., 2017; Swanson et al., 2011). In young people, engagement in disordered eating behaviours has been found to result in decreased quality of life (Herpertz-Dahlmann et al., 2008). When followed up 6 years later, continued disordered eating behaviours subsequently increased depressive symptoms (Herpertz-Dahlmann et al., 2015).

Weight control behaviours are also strongly related to self-esteem and depression (Yeatts et al., 2016). A recent study of more than 5000 men and women found that long term engagement in disordered eating behaviours resulted in psychological distress (Karkkainen et al., 2018). The consequences of AN in particular are more severe than any other mental disorder, and standardised mortality rates from suicide is the highest of any psychiatric

disorder (Watson et al., 2010). In particular, women with AN are 31 times more likely to attempt suicide than the general population (Peckmezian et al., 2017). Additionally, standardised mortality rates for EDs are 12 times higher than the annual death rate from all causes in 15–24–year–old females, with up to 10% dying as a direct result of their disorder (Birmingham et al., 2005; Watson et al., 2010). It is clear that EDs are serious health issues with, at times, fatal consequences. The risk factors behind these conditions will now be described.

1.2.1 Risk Factors

The strongest individual risk factor for the development of an ED is engagement in disordered eating (Loth et al., 2014; Peckmezian et al., 2017), which involves abnormal or disturbed eating behaviours and cognitions such as restrictive dieting and compensatory weight-loss efforts (Pereira & Alvarenga, 2007). It is important to note the distinction between disordered eating and EDs; unlike those with a diagnosed ED, those who engage in disordered eating do not fully meet the criteria for a clinical diagnosis due to reduced frequency or severity of behaviours (Muazzam & Khalid, 2011). However, disordered eating at a level severe enough to warrant an ED diagnosis may go unnoticed. This can often be due to the adoption of disordered eating behaviours by large groups of people (e.g., restrictive dieting in women), subsequently normalising these behaviours and making it difficult to detect differences in severity (Pereira & Alvarenga, 2007).

Dieting is also a substantial risk factor for the development of an ED (Peckmezian et al., 2017; Watson et al., 2010). Dieting, for the purposes of this Thesis, is defined as an intentional effort to lose weight through a deficit in energy intake (Lowe, 2015). Early research into dieting behaviours has found that weight-control during childhood and adolescence often precipitates EDs (Bemis, 1978; Crisp, 1970), findings which have continued to be supported in more recent years (Stice et al., 2011, 2017). High frequency

dieting in young women has also been associated with poor health outcomes including depression and disordered eating (Kenardy et al., 2001). Further, research has suggested that engaging in regular dieting behaviour is associated with an eight times greater risk of developing an ED later in life (Patton et al., 1990). The risk is even greater in females who are considered to engage in dieting to a severe level (beyond that considered a usual frequency), who are 18 times more likely to develop an ED (Patton et al., 1999). Finally, in considering dieting on a scale from *minimal* to *extreme*, psychiatric morbidities in those labelled extreme dieters were considered to be on a similar spectrum to clinically diagnosed EDs (Patton et al., 1997).

Body dissatisfaction has consistently been linked to weight control practices and EDs (Abood & Chandler, 1997; Fairburn, 2008; Gardner et al., 2000; Klemchuk et al., 1990; Lantz et al., 2018; Stice, 2001), whereby individuals with high ED symptomology or ED diagnoses typically exhibit high body dissatisfaction (Culbert et al., 2015; Peckmezian et al., 2017). Of importance is the discrepancy between an individual's perception of their *actual self* (how they view their current body weight and shape) and their *ideal self* (the body weight and shape they desire). Those diagnosed with EDs tend to have a more distorted perception of their own body size, hence a greater desire to bridge the gap between the actual and ideal, often through weight control behaviours (Lantz et al., 2018). Relatedly, low levels of self-esteem have been associated with purging behaviours (Stephen et al., 2014), and adolescents with EDs have been found to have lower social and body self-esteem than their undiagnosed counterparts (Trallero et al., 2005). Girls aged 11–12 years with low levels of self-esteem were also found to have a greater risk of developing an ED by 15–16 years of age in a prospective study of 594 schoolgirls (Button et al., 1996). Similar findings have been reported by McVey and colleagues (2002). Considering, it is perhaps unsurprising that an

intervention with a strong self-esteem component successfully increased body satisfaction and decreased eating problems in school children of a similar age (McVey & Davis, 2002).

An individual's weight status is also associated with their risk of developing an ED. BED is common in those who have overweight or obesity, with 30% who seek treatment engaging in binge eating behaviours (Grucza et al., 2007; Puhl & Suh, 2015b). The prevalence of lifetime obesity in those with an ED is 28.8%, ranging from 5% (AN) to 87% (BED); this demonstrates a threefold increase between 2002–2012 (Villarejo et al., 2012). Adults with either BN or BED also have a greater likelihood of reporting obesity at childhood (Hilbert et al., 2014). Qualitatively, participants with overweight/obese weight status have described experiencing weight stigma and subsequent shame and guilt, which can often result in unhealthy weight control behaviours (Thomas et al., 2008). Many have also reported weight difficulties occurring prior to the development of disordered eating behaviours (Puhl & Suh, 2015b).

Similarly, weight stigma may also contribute to the development of EDs, most commonly in the form of binge eating due to teasing, blaming of the individual, and the subsequent shame experienced (Gardner et al., 2000; Puhl & Suh, 2015a, 2015b). The ways in which an individual internalises weight stigma – that is, agreement with and personal application of negative stereotypes about weight (Durso & Lattner, 2008), plays an important role. A study by Mensinger et al. (2016) found that high internalised weight stigma was associated with disordered eating traits in women with a high BMI. This is supported by L. O'Hara et al. (2016) who found that symptoms of EDs were associated with internalised weight stigma and body related shame/guilt regardless of BMI. Durso et al. (2012) also found internalised weight bias contributed significantly to ED psychopathology in persons who were classified as having overweight with BED. Similarly, Carels and colleagues (2010) found weight loss

seeking individuals who reported weight stigma displayed higher levels of depression and binge eating and poorer body image.

Lastly, there is evidence for the role of the family in the development of EDs, both biologically (genetics) and socially. Studies on twins and families have found that AN, BN and BED have a high heritability factor (Bulik et al., 2000; Culbert et al., 2010, 2015; Strober et al., 2000). More specifically, relatives of the first degree (e.g., parents, children, and siblings) of individuals with AN are 11 times more likely to experience AN than controls of unaffected relatives (Strober et al., 2000). In a review of twin studies, heritability estimates for BN ranged from 28–83% (Bulik et al., 2000). In other words, genetic factors explained 28–83% of the variability of BN. For BED, the estimated range is between 39–45% (Javaras et al., 2008). Symptoms and characteristics of EDs also have established heritability factors, including restrained eating, intentional weight loss, binging, and purging (Trace et al., 2013). Parental influence is not limited to genetics however, with research suggesting weight-related attitudes and behaviours of parents may have significant effects on their offspring (Abramovitz & Birch, 2000; Gardner et al., 2000; Wertheim et al., 1999). Perceived parental weight concern was found to be a strong predictor of increased ED scores in children aged 6–14 (Gardner et al., 2000). Parental encouragement to lose weight as well as their own restrictive food behaviours predicted dietary restraint in teenage girls (Wertheim et al., 1999). Girls as young as 5 years old have also been found to be influenced by their mothers' dieting habits (Abramovitz & Birch, 2000). Given disordered eating in childhood and adolescence predicts ED behaviour into adulthood (Herpertz-Dahlmann et al., 2015; Neumark-Sztainer et al., 2011), these findings highlight the need to address risk factors early in life. In addition to this, other influences outside of these risk factors (e.g., society and culture) are important to explore.

1.2.2 Cultural Beauty Standards and the Thin Ideal

Cultural ideals of thinness have been explored from as early as the 1950s (Ford & Beach, 1951). In societies of Western and high SES status, the long–held ideal of beauty has been one of slimness and whiteness (Bryant, 2013; Swami et al., 2010). Though the intersection of race and beauty ideals exceeds the scope of this Thesis, the notion of a cultural preference towards slim bodies is highly relevant. Granted, cultural preferences do differ across countries, regions, and communities. Unlike Western culture, it is thought that a preference for larger body types exists in areas where weight status is indicative of resource abundance (e.g., food), such as those with lower SES status (Swami et al., 2010). However, cross-cultural data shows an overwhelming preference for smaller body types, thought to be in part due to increasing Westernisation (Becker, 2004; Becker et al., 2002; Gray & Frederick, 2012; Swami et al., 2010).

The *thin ideal*, as it is often referred, encapsulates the notion of the *ideal* body type being one that is thin; most often celebrated and promoted by the media, fashion and pop-culture (Thompson & Stice, 2001). Early research into the thin ideal proposed that the cultural ideal for female thinness at a weight lower than the norm for the population is responsible for the overwhelming body dissatisfaction and consequent depression experienced by women (McCarthy, 1990). Of significant importance is the level to which an individual internalises, or "buys into" such ideals, known as *thin ideal internalisation* (Schaefer et al., 2019). A plethora of research supports the argument that those with high levels of thin ideal internalisation are at greater risk of developing an ED (Austin & Smith, 2008; Culbert et al., 2015; Keel & Forney, 2013; Schaefer et al., 2019; Thompson & Stice, 2001; Van Diest & Perez, 2013). Likewise, interventions to reduce thin internalisation have been effective in subsequently reducing ED symptoms (Matusek et al., 2004; Stice et al., 2000; Van Diest & Perez, 2013).

It is evident that young people are acutely aware of the cultural desirability of thinness, with research demonstrating children as young as three are aware of and participate in the thin ideal (Harriger et al., 2010). Studies have shown that when children are presented with drawings of a range of body shapes, overweight body types are consistently rated lowest, with thin bodies most favoured (Chalker & O'Dea, 2009; Latner & Stunkard, 2003). Additionally, children associate thinner bodies with being smarter, happier, better at sports, and more popular (Chalker & O'Dea, 2009). Studies in adults have also reported weight-based bias and discrimination in the workplace, healthcare, personal relationships, and media settings (McLean et al., 2021; Puhl & Heuer, 2009, 2010; Thomas et al., 2008).

Perhaps the largest contributor to the thin ideal is the media, with film, television, magazines, and mass advertising continually promoting the desirability of thin, lean bodies (Herbozo et al., 2004; Himes & Thompson, 2007; Sypeck et al., 2004; Willis & Knobloch-Westerwick, 2014). Repeatedly, reviews have found that this media content negatively influences body image and eating behaviours (Groesz et al., 2002; Lopez-Guimera et al., 2010; Thompson & Heinberg, 1999), with high levels of body dissatisfaction and restricted food intake reported after exposure to images and reminders of the thin ideal (Anschutz et al., 2011; Bessenoff, 2006; Boyce & Kuijer, 2014; Harper & Tiggemann, 2008; Stice et al., 1994; Yamamiya et al., 2005). More recently, modern forms of media such as social networking sites have also been found to have the same effect. A meta-analysis of six studies found that higher use of social networking sites was associated with greater internalisation of the thin ideal (Mingoia et al., 2017). Utilisation of social networking sites has also been shown to influence disordered eating behaviours in a review of 20 studies (Holland & Tiggemann, 2016), emphasising the influence of social media usage on ED risk. Having considered the role of the thin ideal and cultural beauty standards in the development of EDs, it is also relevant to consider the related concept of body image.

1.2.3 Body Image

The interrelation between body image and EDs is an important consideration. Body image refers to a person's perception of their physical, aesthetic self, and the feelings and emotions arising from this perception (Watson et al., 2010). Therefore, positive body image involves pleasant and accepting attitudes towards oneself, whereas poor body image is involved with negative thoughts, often resultant in body dissatisfaction and extreme investment in physical appearance (Cash et al., 2004; Peckmezian et al., 2017; Watson et al., 2010). Body image is a leading concern amongst Australian young people aged 12–25 (Peckmezian et al., 2017). Survey data demonstrates almost half of Australian women and one third of Australian men are not satisfied with their bodies (Mellor et al., 2010). Results from a cohort of Australian women also demonstrate that 74% wanted to lose weight, despite 64% and 25% of these women being classified as healthy weight and underweight respectively (Mellor et al., 2010). Furthermore, 54% of girls and 19% of boys were afraid of gaining weight in the last month (O'Connor et al., 2018). Long-term cultural beauty standards and thin idealisation (and their subsequent internalisation) are a major contributor towards such desire for weight loss (O'Connor et al., 2018; Thompson & Stice, 2001).

A distorted perception of, and intense preoccupation with one's own body has been classified into conditions and experiences including body image disturbance, body image distortion, body image discrepancy, body image disorder, and body dysmorphia (Artoni et al., 2021; Crowther et al., 1992). However, there exists a discrepancy in the literature as to the definitions, and similarities and differences between these constructs (Crowther et al., 1992). For example, body dysmorphic disorder (BDD) is classified under *Obsessive Compulsive and Related Disorders* (as opposed to *Feeding and Eating Disorders*) in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), and often involves preoccupation with a certain body area unrelated to EDs (e.g., mouth, nose; APA, 2013). However, some argue ED

patients do consistently present with BDD (Crowther et al., 1992). Alternatively, body image disturbance, otherwise referred to as body image distortion, body image discrepancy or disturbed body image, involves a disturbance in the way a person experiences their weight or shape (APA, 2013; Artoni et al., 2021). Artoni and colleagues (2021) argue that it is not to be confused with body dissatisfaction, which only constitutes one aspect of body image disturbance. Although there is inconsistency amongst these terms and their usage, the relationship between these conditions and EDs is well documented, with negative body image and body image disturbances a frequent symptom in those with EDs (APA, 2013; Crowther et al., 1992; Rosen, 1990; Ziser et al., 2018).

Interventions aimed at improving body image have shown to be effective in the treatment of disordered eating behaviours. In a recent case control study, a program aimed at improving body perception amongst ED inpatients successfully reduced ED symptomology at demission (Artoni et al., 2021). Similarly, Calugi and colleagues (2017) reported an intervention to decrease body checking, a consistent feature of poor body image, resulted in improvements in ED psychopathology. Dissonance-based treatment programs on media literacy and decreasing thin ideal internalisation have also been found to be effective at improving body image and subsequent disordered eating behaviours (Stice et al., 2009; Watson et al., 2010; Yager & O'Dea, 2008). So too have interventions to increase self-esteem (O'Dea & Abraham, 2000; O'Dea, 2004a). However, attempts to improve individuals' own body image must also be considerate of potential adverse outcomes. O'Dea (2002) found that educational posters aimed at improving body-image in adolescent girls actually made many of them feel more self-critical towards their own bodies. As such, cautionary steps need to be considered when developing ED interventions in schools (O'Dea, 2000). Interventions also need to be cognisant of other risk factors, such as those attributable to both overweight/obesity and EDs, and consider the interrelationship between these conditions.

1.3 Interrelation of Overweight/Obesity and Eating Disorders

Weight status as a risk factor for EDs has been discussed previously (Section 1.2.1), however the interrelation of these warrants further consideration. According to the National Eating Disorders Collaboration (NEDC; 2017) and Darby et al. (2009), the rates of comorbid obesity and EDs has increased more than either condition alone. There is a body of literature suggesting these conditions share multiple risk factors, including body dissatisfaction and unhealthy weight control/dieting practices (da Luz et al., 2017; Darby et al., 2007; Haines & Neumark-Sztainer, 2006; Irving & Neumark-Sztainer, 2002). Some have also posed shared genetic risk factors (Day et al., 2009). Disordered eating behaviours have also been shown to contribute to the development of obesity and vice versa (da Luz et al., 2017; Darby et al., 2007; Puhl & Suh, 2015b). The prevalence of obesity with comorbid BED has increased significantly since 1995 (da Luz et al., 2017). That is, persons with overweight and obesity have high rates of binge eating and have been found to engage in unhealthy weight control practices (Irving & Neumark-Sztainer, 2002; Puhl & Suh, 2015b; Watson et al., 2010). Neumark-Sztainer et al. (2002) also found alarmingly high engagement in dangerous weight-control practices by overweight and obese adolescents (e.g., diet pills, laxatives, and vomiting). Even though persons with overweight and obesity have an increased risk of developing an ED, their symptoms and diagnoses are often overlooked due to their higher weight status (Sim et al., 2013). This is especially true in the case of atypical anorexia. Patients with atypical anorexia meet all of the criteria for traditional AN aside from underweight status (Forney et al., 2017; Moskowitz & Weiselberg, 2017). That is, despite experiencing rapid and extreme weight loss, they may still present as *normal* or *over* weight. In these patients, their illness can be just as severe as those with AN, but may be overlooked due to their failure to *appear* anorexic (Garber et al., 2019; Moskowitz & Weiselberg, 2017).

As increasing focus ensues alongside a rising prevalence of overweight and obesity and EDs, integrated prevention is warranted, and is possible to achieve (Haines & Neumark-Sztainer, 2006; Irving & Neumark-Sztainer, 2002; NEDC, 2017; Neumark-Sztainer, 2016; Watson et al., 2010). Alternatively, addressing them independently may actually detract from the success of either one (Watson et al., 2010). In the case of obesity prevention efforts, non-integrated prevention may prompt further exacerbation of risk factors such as heightened weight and shape concern and disordered eating habits (Leme et al., 2018). Hence, strategies such as that implemented by Wilksch and colleagues (2015) offer a sound solution. Their intervention, 'Media Smart', decreased both ED and obesity risk factors in high school students at 12–month follow up (Wilksch et al., 2015). Similarly, an earlier study by Austin et al. (2005) successfully implemented an integrated prevention strategy in girls aged 10–14 years. Another approach gaining momentum in the intervention field is the Health at Every Size® (HAES) movement, whereby the focus is not placed on weight but rather on other positive life outcomes (e.g., physiological improvements, increased self-esteem; also known as a *non-diet* method; Bacon & Aphramor, 2011). One study implementing the HAES® approach found health improvements (e.g., increased physical activity, reduced cholesterol, and blood pressure) to be successfully sustained over the long-term when compared to a traditional diet approach (Bacon et al., 2005). A review by Clifford et al. (2015) also found that non-diet approaches were effective in improving disordered eating, self-esteem and depression even when no significant change in weight gain was seen. These findings propose a modern, alternative method where health is measured more holistically, opposed to solely being determined by weight status. However, although these approaches may offer future solutions, it is important to consider current and existing initiatives from a public health perspective.

1.4 Public Health Efforts for Overweight and Obesity

The global prevalence of overweight and obesity has been described as a pandemic (Meldrum et al., 2017). As would be expected of any pandemic, a large global public health response has ensued. Many have referred to this as a *war on obesity* (Bombak, Monaghan, & Rich, 2019; O'Hara & Gregg, 2006; Salas, 2015). Given that overweight/obesity is often attributable to energy in exceeding energy out (Bombak, Monaghan, & Rich, 2019; WHO, 2020), strategies to combat these conditions usually revolve around reducing energy intake and increasing energy expenditure. Strategies vary in their delivery and medium, and also their level of success. The following presents some of the most relevant and large–scale efforts in more depth.

1.4.1 Interventions

In response to the increasing global prevalence of overweight and obesity, weight-loss trials and lifestyle interventions have been administered in abundance. In essence, despite differences in application, most efforts target weight loss from a dietary perspective, encouraging lower daily energy intake and limitation of certain food groups. Increasing physical activity levels may also be a component of these interventions.

Interventions may be delivered in a variety of settings such as clinical trials (Franz et al., 2007), web-based (Arem & Irwin, 2011) or primary care (Booth et al., 2014), and to a variety of different age groups (Batsis et al., 2017; Poobalan et al., 2010). Despite each of these reviews detailing dozens of studies, the effectiveness of these interventions in maintaining long-term weight loss remains elusive. Additionally, there is increasing concern that such major focus on weight-based outcomes is contributing to the increasing prevalence of body dissatisfaction and eating disorders seen today (Brownell & Rodin, 1994; Patton et al., 1997; Szwarc, 2003; Watson, 2011).

Evaluations of weight-loss interventions have indicated that professionally administered programs with adequate monitoring and supervision do not further contribute to disordered eating behaviour (Butryn & Wadden, 2005; Da Luz et al., 2015). However, a comprehensive review by the NEDC found that in most cases, ED related outcomes are not sufficiently measured or reported (NEDC, 2017). This is supported by an additional, separate review; although weight loss demonstrated some improvements in ED psychopathology, the authors concluded that ED outcomes were rarely assessed (Peckmezian & Hay, 2017). Hence, it is difficult to confirm whether or not these conclusions are accurate, however in-depth case studies directly measuring ED related outcomes have found weight loss efforts to lead to the development of EDs (Sim et al., 2013). These inconsistencies highlight the need for greater, more accurate measuring and reporting of adverse ED outcomes in the pursuit of weight loss.

1.4.2 Policy

Policies that affect our food and physical environment have been advocated as a promising method of behaviour change (Ananthapavan et al., 2018; Chan & Woo, 2010; Morley et al., 2012). Notable policies have included sugar-sweetened beverages tax (Jones, 2016), nutrition education in schools (Briggs et al., 2003; Foster et al., 2008), and fast-food advertising bans (Obesity Policy Coalition, 2018). However, of most relevance to this discussion in particular is the addition of nutrition (kilojoule (kJ)/calorie (kcal)) labelling on foods and food menus (Food Standards Australia New Zealand, 2013). Kilojoule or calorie counting is a common method of weight control and food restriction amongst persons with EDs, with greater levels of monitoring associated with increased severity of the disorder (Romano et al., 2018; Simpson & Mazzeo, 2017). Therefore, it must be considered whether the provision of precise energy content on food packaging may exacerbate this behaviour. A similar concern exists for the mandatory provision of kJ/kcal on chain-restaurant menus.

Larson and colleagues (Larson et al., 2018) found the presence of energy content on restaurant menus to be associated with binge eating and unhealthy weight control behaviours (UWCB) in both women and men. In a recent online randomised study, this form of menu labelling resulted in restricted ordering of calories by persons with EDs (Haynos & Roberto, 2017). Additionally, in a population-based survey, approximately one third of college students reported that they believed calorie labelling may negatively impact individuals with disordered eating (Martinez et al., 2013). Such concern has been taken seriously by Harvard University, which removed nutrition labelling from their dining halls after numerous student complaints (Hu, 2008). This settings–based approach to obesity prevention is frequently implemented in public health, targeting not just adults but also young people, too.

1.4.3 Strategies in Children

Prevention efforts in children have largely been implemented in the school setting. Guidelines for intervention programs in schools advise a non-weight centric approach, instead focusing on overall wellbeing and the non-aesthetic benefits of a healthy lifestyle (Berg et al., 2003; O'Dea, 2000); the consequences of not doing so raises fears of exacerbated weight-based stigma and unhealthy dieting behaviour (Kenney et al., 2017; O'Dea, 2000):

> The unintentional creation of body image and weight concerns, dieting, disordered eating and eating disorders is a probable outcome of child obesity prevention programs that focus on the 'problem' of overweight and refer to issues of weight control…Health education messages about overweight and weight control are likely to make young people feel worse about their bodies and themselves in general. (O'Dea, 2004b, p.4)

Similar to studies in older age groups, research on the potential harm of school-based interventions for weight-loss yields inconsistent results. Some studies have found that obesity

prevention programs lowered incidence of unhealthy weight control behaviours (Austin et al., 2005; 2007), with others having found no impact on disordered eating (Larson et al., 2017). Davison and Deane (2010) found that encouraging girls to be active for weight loss resulted in higher weight concern. Similarly, a Singaporean study also found that 11% of persons with EDs reported they were triggered by compulsory participation in a school health and fitness program for students classified as having overweight (Lee et al., 2005). What does appear consistent, however, is that ED related outcomes are not adequately measured in this area, with a review finding that in 22 studies of childhood obesity prevention programs, none measured ED or other psychiatric outcomes across intervention or control groups (Carter & Bulik, 2008). A review by van Wijnen et al. (2009) also reported that only a minority of childhood obesity interventions assessed the impact of programs on psychosocial wellbeing. This is supported by a more recent review by the NEDC, which included studies from 2011 onwards only (NEDC, 2017). As mentioned earlier in this chapter (Section 1.3), integrated prevention models (combining obesity and eating disorder prevention) show some promise in improving both weight status and ED related behaviours (Austin et al., 2005; Ishak et al., 2016; Niide et al., 2013; Wilksch et al., 2015). However, it is believed that overall a more holistic approach, including the implementation of a positive body-image curriculum, is needed (Bray et al., 2018).

The introduction of BMI report cards in some schools—a process whereby children are weighed at school and a report of their BMI status is provided to parents—has also attracted criticism over concerns the program could decrease children's self-esteem and encourage weight-based teasing (Henningsen et al., 2015). First introduced in the U.S. in 2003, the program is now mandatory under legislation in around 50% of states (Vogel, 2011). A review on the administration of BMI report cards in U.S. schools suggested a lack of evidence on the effectiveness of this strategy, and that the potential harms that may result (e.g., extreme

dieting, weight-based teasing) outweigh the potential benefits (Evans & Sonneville, 2009). Two updated reviews, however, suggest that the evidence is not conclusive in either support of or rejection of the potential harms and that more research is needed (Henningsen et al., 2015; Thompson & Madsen, 2017). Hence, as with interventions in adolescents and adults, the potential to negatively influence participants' thoughts, behaviours and attitudes towards food and their bodies needs to be taken into consideration. The measurement of ED related outcomes also needs to be routinely implemented in intervention and program evaluation, to further understand the extent to which harm may be caused. One such area that has failed to consider adverse effects is anti-obesity public health messaging, which will now be explored in more depth.

1.5 Public Health Anti-Obesity Campaigns

Many health campaigns have been generated in response to the increasing prevalence of overweight/obesity in the form of community approaches and social marketing, with these often including messages on dieting and weight loss (Watson, 2011; Walls et al., 2011). In 2011, the NEDC released a report titled *Evaluating the Risk of Harm of Weight-Related Public Messages,* detailing concerns that such messages may cause unintended harm in vulnerable audiences (Watson, 2011, p4):

> Addressing unhealthy weight and weight gain is a national health priority and there are many campaigns, materials, and resources that provide information on this topic for the general public and health professionals. Obesity and related campaigns often focus on changing thoughts and behaviours related to eating and weight, within the context of adopting a healthier overall lifestyle. While addressing these issues, care must be taken not to cause unintended harm, such as increasing vulnerability to onset of eating disorders or disordered eating, or exacerbation of the risk factors that may predispose to these conditions.

This statement and accompanying report accurately summarise the overarching context in which this Thesis is based. Some of the concerns raised by the NEDC in relation to weight-related messaging included: An overemphasis on weight and BMI as predominant markers of health may promote weight bias and stigmatisation; moralising eating and labelling foods as *good* and *bad* may encourage feelings of guilt leading to restriction and binge eating; awareness campaigns highlighting childhood obesity may encourage children and parents to engage in restrictive dieting; and weight-loss initiatives that are not well-planned may make people feel more self-conscious and reduce self-esteem (Watson, 2011). As a result of these, a framework to assess weight-related health promotion messages was established (Appendix A). The framework suggests that healthy messages include those focused on a flexible approach to eating, the adoption of healthy behaviours for overall physical and mental wellbeing, and respect for all persons at any weight or shape. Conversely, harmful messages were thought to include those with a strong focus on dieting and restriction, physical activity for the sole purpose of weight loss, and excessive focus on weight/BMI (Watson, 2011). However, despite these concerns, research studies that specifically and adequately measure disordered eating risk factors after exposure to weight-related public messages are scarce. This highlights the necessity for further investigation of anti-obesity messages distributed through public health campaigns on a population-based scale. These will be hereafter referred to as public-health messages (PHMs).

Although limited, existing research does demonstrate the potential for unintended harm. Detailed qualitative insights have provided evidence that PHMs addressing overweight and obesity perpetuate stigma towards persons in these weight categories (*overweight*, *obese*) (Couch et al., 2017; Lewis et al., 2010; Malterud & Ulriksen, 2010). Quantitative data have revealed similar findings (Puhl & Luedicke, 2013; Puhl et al., 2013; Simpson et al., 2019). Exposing participants to a weight-related psychoeducational message condition (*pro-diet*) has

also shown to produce significantly greater perceived pressure to lose weight and intention to diet when compared to controls (Roehrig et al., 2008). Given these campaigns are often produced on a population-based scale, it is inevitable that although they may reach some audiences for which they were intended, vulnerable groups such as young persons or persons with EDs may be exposed and subsequently harmed (Walls et al., 2011). In this apparent cost-benefit scenario, it is important to then consider whether or not these campaigns are effective in achieving their desired outcomes for intended audiences, and at what cost.

1.5.1 Effectiveness of Public Health Campaigns–General

The effectiveness of public health campaigns en masse attracts contention amongst scholars, and evaluations implementing appropriate frameworks are lacking (Walls et al., 2011). Early research on the effectiveness of such campaigns often demonstrated little impact on desired behaviour change. For example, a review of two major anti-tobacco campaigns in the U.S. found that although one was successful in reducing smoking desire in teens, the other had the opposite affect (Farrelly et al., 2002). Further, as discussed by Hornik (2002), numerous large, community-based U.S. trials showed little-to-no effect on health outcomes, including the Stanford Five City Project for the prevention of cardiovascular disease (CVD; Farquhar et al., 1990), and the Minnesota Heart Health Program (Luepker et al., 1994). Evaluation of a large, scale 6-year campaign in the U.S. to reduce drug use in youth was also found to have no effect (Magura, 2012). Conversely however, a global systematic review to determine whether mass media campaigns for drunk-driving are successful found that overall benefits of the campaigns were greater than costs, and concluded that campaigns are effective in reducing alcohol-related crashes (including Victoria's TAC campaign; Elder et al., 2004).

In more recent times, campaign evaluations have demonstrated some success. For example, the Canadian *My ParticipACTION* campaign successfully increased self-efficacy to participate in physical activity in adults, however actual behaviour change was not measured

(Craig et al., 2015). *Find 30 Everyday*, encouraging people to exercise for 30 minutes per day, was also seen to help improve physical activity levels in a WA population (Leavy et al., 2013). Additionally, Wentzel-Viljoen and colleagues (2017) reported increased awareness and consequent reduction of salt intake in a South African population exposed to a mass media campaign addressing the links between salt and CVD. An evaluation of a Western Australian cancer awareness campaign was shown to increase awareness of early prevention (Croager et al., 2018). It is evident, then, that the effectiveness of campaigns is mixed and what has been successful in some contexts has been less effective in others. Of particular importance to this Thesis is the effectiveness of anti-obesity public health campaigns.

1.5.1.1 Anti-Obesity Public Health Messages.

The effectiveness of anti-obesity PHMs is useful to consider when addressing the greater context of their potential to cause harm. Locally, a 2016 evaluation of the Western Australian (WA) *LiveLighter* campaign—targeted at obesity prevention in adults—reported increased awareness of overweight and obesity in WA, versus the control state of Victoria (Morley et al., 2016). However, there was no actual measure of behaviour change, although intentions to change were thought to precede actual behaviour change. The Australian *Measure Up* campaign, which encouraged audiences to measure their waist circumference to assess disease risk, was evaluated by Grunseit et al. (2015) who found that populations with recalled exposure to the campaign reported intentions to improve their diets (or were already doing so). Further, the *Go For 2&5* campaign in WA was found to be effective at increasing population intake of fruit and vegetables (Pollard et al., 2008). Similarly, evaluation of three different campaigns to reduce intake of sugar-sweetened beverages demonstrated increased intentions to reduce consumption (Bleakley et al., 2018) and actual reduced consumption (Bonnevie et al., 2020; Farley et al., 2017). In Victoria, a campaign on the link between abdominal fat and cancer risk was also effective at bringing awareness and intended

behaviour change; again however, actual behaviour change was not measured (Morley et al., 2009).

Looking to reviews, Wakefield and colleagues (2010) also found moderate evidence for behaviour change as a result of diet-related mass media campaigns. A similar review by Stead (2007) found some evidence for effectiveness of social marketing campaigns on behaviour change, however results were mixed. Conversely, the *Swap It Don't Stop It* campaign (a follow up to *Measure Up*) was found to only have moderate effects, with only 16% of respondents recorded swapping a behaviour (B. J. O'Hara et al., 2016). Finally, looking internationally, the British Broadcasting Corporation's (BBC) *Fighting Fat Fighting Fit* campaign was found to have good reach and modest recall, however did not measure intended or actual behaviour change (Wardle et al., 2001). Additionally, Wammes et al. (2007) found that a Dutch campaign aimed at reducing obesity in young adults had a small positive effect on intentions for behaviour change.

As with other public health campaigns, it is evident that those targeting obesity and related issues yield varied results. It is also important to highlight that many campaign evaluations only measure *intentions* for behaviour change, as opposed to *actual* behaviour change. Granted, the logistics of doing so would be more complex and difficult to validate, though it prompts the question of whether weight is an appropriate target of behaviour change interventions. Worth considering is the position statement by the Academy of Eating Disorders, in which they state "weight is not a behaviour and is therefore not an appropriate target for behaviour modification" (Daníelsdóttir et al., n.d.). Hence, those solely focused on weight related outcomes may consider shifting to a less weight-centric approach, and focus more on desired healthy behaviours. Further, there are ethical implications involved with targeting weight status that need to be considered.

1.5.2 Ethics

Ethical considerations are a major component of public health promotion and disease prevention. For decades, researchers have debated over the strategies implemented by governments and health bodies to address major health issues. For example, the public health response to the HIV/AIDS epidemic has been widely criticised (Bayer & Fairchild, 2016; Bayer & Stuber, 2006; Puhl & Heuer, 2010; Valdiserri, 2002). Of particular relevance to the discussion on ethics and anti-obesity PHMs is the stigmatisation surrounding weight status, as well as the contentious use of fear-based tactics.

1.5.2.1 Shame, Blame and Stigma.

Guttman and Salmon (2004) argue that public health communications must consider adverse effects, including who the target intervention is aimed at and whether it is unnecessarily reaching other audiences. For example, weight control messages may further encourage already thin persons to eat even less, childhood obesity campaigns may stigmatise children who are overweight, and anti-smoking campaigns with imagery of cigarettes may further trigger smokers to smoke (Guttman & Salmon, 2004). This highlights the ability for communications encouraging healthy lifestyles to shame or blame consumers through moral nuances and further contribute to the stigma of *lazy* or *gluttonous*. More so, blaming the individual for their health only further reinforces the concept of micro/downstream treatment over upstream social and economic responsibility. This is problematic when considering that many of the major determinants of health are upstream factors (e.g., accessibility of healthy, nutritious foods; Becker, 1993; Wilkinson & Marmot, 2003). In this instance, these factors may play a greater role in an individual's dietary choices than solely downstream factors (e.g., food preferences). This notion also consequently relieves important agencies of responsibility (i.e. government), instead utilising guilt tactics which in and of themselves have the ability to create physical and emotional illness (Becker, 1993).

In such cases, it is important to consider the ethical principles of health promotion, in particular that of non-maleficence, and the responsibility of policy makers and campaign creators to *do no harm* (Guttman, 2017). Though some have posed the notion that sometimes stigmatisation of certain groups is unavoidable and perhaps a worthwhile sacrifice for the *greater good* (Bayer, 2008; Bayer & Stuber, 2006), others remain staunch in their belief that using fat stigma as a tool to combat obesity is an ethical violation (Pausé, 2017). Regardless, the efficacy of such efforts must be taken into account; as stated plainly by Tomiyama and Mann, "if shaming reduced obesity, there would be no fat people" (Tomiyama & Mann, 2013, p.2) This notion is also relevant to the use of fear tactics in health communications, described in more detail in Section 1.5.2.2.

1.5.2.2 Fear Tactics.

Early research from the 1980's and 1990's highlights the ethical concerns of public health communications and the use of fear tactics, hyperbole and subtle manipulation (Goodman & Goodman, 1986; Witte, 1994). Contention exists amongst health professionals as to whether fear campaigns incite behaviour change or create a defensiveness to adopt change. A comprehensive meta-analysis of over 100 articles found that the more severe the fear is perceived to be and the more susceptible one feels, the more likely the individual is to adopt an attitude and engage in behaviour change (Witte & Allen, 2000). Though the finding was deemed reliable, it was considered weak by the authors as significant heterogeneity existed in almost all studies. For example, 13 studies in this review found that as the strength of the fear appeal increases, so too does a defensive response and resistance to the message (Witte & Allen, 2000). Whether the individual has high self-efficacy in adopting the behaviour change was also important in determining whether the message was rejected. Personal characteristics (e.g., age, gender, and health) were not found to have any effect on message perception. Further, the authors highlight that most studies have been laboratory

based, and research in natural environments is lacking (Witte & Allen, 2000). Recently, however, more reliable results were provided in an updated review and meta-analysis on over 127 papers (Tannenbaum et al., 2015), with the consistent finding that fear-based campaigns were effective at increasing attitudes, intention of behaviour change and actual behaviour change, and no reports of undesirable outcomes.

Despite these findings, the discussion around fear-based tactics has continued, with a 2016 paper in the Journal of Medical Ethics detailing the ongoing debate of fear-based PHMs and the notion of some cases being unethical and creating stigmas (Bayer & Fairchild, 2016). The authors describe fear-based campaigns as having the potential to create psychological and social burden, thereby questioning the efficacy of such practices (Bayer & Fairchild, 2016). Perhaps then, it is worthwhile considering the idea of *some* cases; while overall, undesirable outcomes may not produce significance, inevitably some audiences are going to be affected. Thus, it seems that the consideration of the ways in which PHMs can cause fear in persons who are not at risk of the condition in question remains relevant, and health promotors must consider the responsibility they have to act ethically in these circumstances. Finally, when relating back to the issue of fear tactics for obesity prevention, it is worth considering that despite its frequent implementation, the prevalence of overweight and obesity has not been curbed. In fact, it is important to consider this point in the broader context of this Thesis, and when considering the potential for campaigns to cause unintended harm.

1.5.3 Summation

This introductory chapter presented the topics of overweight/obesity and EDs, the greater context in which these health conditions exist, their interrelations, and risk factors and efforts for prevention. In doing so, it has highlighted the need for further investigation into how obesity prevention efforts may negatively influence risk factors for disordered eating and

the development of EDs. Granted, both are important health issues in their own right, however efforts to improve one condition at the subsequent cost of another is counterintuitive and inefficient. This Thesis endeavours to explore this in greater depth using a mixed-methodological approach.

1.6 Thesis overview

1.6.1 Thesis Aims and Objectives

The overall aim of this Thesis is to explore the influence of anti-obesity public health campaigns and their associated messages on risk factors for disordered eating and the development of eating disorders.

Specifically, the objectives of this Thesis are:

- To provide an overview of the existing literature investigating public health anti-obesity campaigns and their effect on ED related factors (Study 1).
- To quantitatively measure the effects of real–world anti-obesity campaigns on risk factors for the development of EDs (Study 2).
- To qualitatively explore how persons with EDs experience public health anti-obesity campaigns (Study 3).

1.6.2 Thesis Structure

This Thesis, including published works, is presented in seven chapters:

Chapter 1, the introductory chapter, provides the foundations and context upon which this Thesis dissertation is based. *Chapter 2* is designed to introduce the subject of mixed methods research, as well as provide a rationale and justification for the implementation of mixed methodology throughout this Thesis. *Chapter 3* presents the first research component of this Thesis–the systematic literature review (SLR; Study 1). This review provides an overview of the current research landscape, and provides direction for the remaining studies.

Chapter 4 details the second research study conducted in this PhD project (Study 2), a quantitative online survey exposing participants to real–world anti-obesity campaigns, measuring ED related outcomes pre-and-post exposure. Following on from Study 2, *Chapter 5* introduces the reader to qualitative research designs and the specific approach used in Study 3–Interpretative Phenomenological Analysis (IPA), providing important context for the proceeding chapter. *Chapter 6* then details the final study in this Thesis (Study 3), in which qualitative interviews were conducted with an ED sample using the approach detailed in Chapter 5 (IPA). Finally, *Chapter 7* (discussion) presents key findings and related implications from each research study, as well as a collective discussion of the Thesis findings overall, with recommendations and future considerations provided.

Two chapters (Chapter 3 and Chapter 4) are comprised mainly of published manuscripts. The manuscripts have been copied directly as text, with the PDF proofs provided in the Appendices (Appendix B, K). Furthermore, the references for these chapters are provided immediately after the manuscript to represent the journal presentation accurately. References for the remainder of the Thesis (Chapters 1, 2, 5, 6 and 7) are collated in an overall reference list, presented towards the end of the document.

Chapter 2: The Validity of Mixed Methodology in Health Research

This Thesis consists of studies of mixed methodologies. It is important to note that although some consider mixed methods to primarily exist within a single study (i.e. quantitative and qualitative methods within one study; Johnson & Onwuegbuzie, 2004), here I refer to the Thesis as a whole body of work in which both quantitative and qualitative methods have been used, hence a mixed-methodological approach. A detailed rationale has been provided in Section 2.1. Briefly, Study 1 (Chapter 3) utilised a systematic review methodology. Due to scarcity of literature in the area of public health messages (PHMs) and eating disorders (EDs), papers that used either quantitative or qualitative methods were included. It was believed to be important to include studies of all designs and methodologies to give an overview of the current literature landscape, as a review on this topic had not previously been performed. The second study of this Thesis (Study 2; Chapter 4) sought to understand the influence of exposure to PHMs on audiences. This research question required a quantitative approach in order to capture a large amount of data and test effects of the independent variable; an aim not suited to qualitative methods. Study 3 (Chapter 6), however, and the final study to be presented in this Thesis, uses qualitative methodology. Informed by the findings of Study 2, Study 3 utilised a qualitative method to further explore the nuance and meanings behind the obtained quantitative data. Thus, within this context, the research questions that underpin this Thesis were addressed using a mixed methods approach.

2.1 History of Mixed Methods Research

Traditionally, research questions were addressed exclusively using either a quantitative or qualitative approach, largely due to beliefs that the two were incompatible (the *Incompatibility Thesis*; Howe, 1988; Onwuegbuzie, 2000). A quantitative approach to research is one with a strong focus on hypothesis testing, rigid structure, numerical analysis, and generalisable data (Johnson & Onwuegbuzie, 2004). This approach is deductive by

nature, in that an existing theory/concept/hypothesis is tested (Johnson & Onwuegbuzie, 2004). In contrast, qualitative researchers endeavour to understand the human experience, utilising a more exploratory approach in order to gain insight into, and discover meanings behind, an area of interest and/or complex phenomena (Liamputtong, 2020; Willig, 2013). Unlike quantitative research, qualitative data is analysed descriptively through the inquiry of words, and is inductive in its approach (hypothesis/theory *generating;* Johnson & Onwuegbuzie, 2004). Despite the initial exclusivity of each of these approaches, the late 20th century saw the emergence of the *compatibility thesis* and the idea that the two research paradigms could be combined, with both approaches existing on a continuum of inquiry, opposed to being completely separate concepts (Onwuegbuzie, 2000; Thierbach et al., 2020).

Since the emergence of the compatibility thesis, the combining of both quantitative and qualitative methods has continued to gain momentum, with the amount of studies and publications using mixed methodologies growing rapidly since 2010 (Thierbach et al., 2020). Mixed methods research (MMR) can vary in its definition, some considering MMR to simply refer to the collection and analysis of two different data types (Tashakkori & Creswell, 2007). Others, however, argue that it is not simply the collection of these data types that constitutes MMR, but the deliberate integration between these two paradigms that is of importance, whereby the insights generated from this integration are greater than either method could have achieved alone (Curry & Nunez-Smith, 2014; Tashakkori & Creswell, 2007). This can exist within a single study or a program of enquiry (Tashakkori & Creswell, 2007). In any case, mixed methods approaches should aim to combine insights of both into a practical solution (Thierbach et al., 2020). For the purpose of this Thesis, I refer to the Johnson, Onwuegbuzie and Turner definition of MMR, which is:

> …the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative

> and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration. (Johnson et al., 2007, p.123)

There are certain advantages to using a combination of both quantitative and qualitative methodology, namely the ability to explore the complexity of a certain topic or issue further than with one method alone. By using MMR, the researcher can play to the strengths and reduce weaknesses of each design (Thierbach et al., 2020). This is particularly relevant when considering complex research environments, where complex research questions may require multifaceted answers (Curry et al., 2013; Fetters et al., 2013). As such, it is important to consider methodologies that may provide the best opportunity to answer the research question in focus. This notion of determining the most appropriate methods to answer a research question(s) is known as research pragmatism. Using a pragmatic approach allows researchers the freedom to choose which methodology would be most beneficial to the questions to which they are seeking answers, even if that involves using a variety of approaches (Feilzer, 2010). Hence, research pragmatism underpins the design of this Thesis, with a variety of both quantitative and qualitative methods deemed most sufficient to address the research questions. The particular application of MMR to this Thesis is described in Section 2.1.1.

2.1.1 Rationale

Given the diverse and complex issues facing health sciences and public health, MMR has been posited as an effective option to address the need for multidimensional inquiry (Creswell et al., 2011; Curry & Nunez-Smith, 2014; O'Cathain, 2009). Implementation of such a design furthers the opportunity for understanding of important, multifaceted issues from a range of different perspectives, including patients and carers (Creswell et al., 2011; Curry & Nunez-Smith, 2014). MMR can also aid in the understanding of beliefs and

motivations that underlie health behaviours in a range of different contexts (Curry & Nunez-Smith, 2014). MMR has been utilised in recent studies tackling some of the most prevalent and complex health issues in society today, including cardiovascular and heart diseases (Hooker et al., 2017; Noonan et al., 2018; Riegel et al., 2018; Tondorf et al., 2018), diabetes (Frøisland et al., 2012; Oster et al., 2014; Seale et al., 2013), and mental illness (Grocke et al., 2014; Hamm et al., 2020; Wiles et al., 2018). MMR has also been implemented in diet and nutrition related studies (Ashton et al., 2017; McGrattan et al., 2021; Roberts et al., 2019). A brief search of the literature yields a multitude of examples of MMR being applied to the field of ED research in the last decade (e.g., (Cardi et al., 2018; Couturier et al., 2021; Nitsch et al., 2016; Seah et al., 2018; Valente et al., 2020; Vanderkruik et al., 2020; Woolhouse et al., 2012; Zugai et al., 2018). For example, Cardi and colleagues (2018) used mixed methods to gain insight into the perspectives of participants with lifetime AN and difficulties with social functioning. Seah et al. (2018) explored the perceptions of carers (nurses) of patients with EDs by utilising a mixed methods design. Similarly, a mixed methods approach was also used to evaluate a paediatric ED treatment program (Couturier et al., 2021). Together, these studies provide evidence of the utility of MMR in public health, and EDs in particular.

When implementing an MMR design, timing and integration is an important consideration. In regards to timing, a study may collect data at a single point in time (concurrently) or sequentially, where one phase of data collection proceeds the other (Creswell et al., 2011; Thierbach et al., 2020). Similarly, the research may be conducted as a single, stand-alone study or as part of a multi-level program of inquiry, whereby a number of studies build upon one another to form part of an overall project (Creswell et al., 2011; Thierbach et al., 2020). In considering integration of the different approaches, this may involve connected integration, whereby one data set builds on the findings of another, or convergent integration, where analysis and merging of data is performed at the same time

(Curry & Nunez-Smith, 2014). Note that timing and integration, whilst seemingly similar, refer to different processes. For example, data may be collected sequentially, but integrated convergently. Conversely, data may be collected concurrently but integrated in a connected manner. Hence, it may be beneficial to consider timing related to data collection and integration related to analysis. Overall, these components assist in the classification of MMR study designs as primarily convergent (parallel/concurrent) or sequential (results build on top of one another; Creswell et al., 2011). It is important to note these classifications are not exhaustive and a wide range of varying approaches may be found in the literature, though convergent and sequential MMR designs are two of the common and easily defined examples. In particular, sequential designs are popular in health science research, where a quantitative analysis is often further explained through qualitative follow up or vice versa (Creswell et al., 2011). It is imperative when considering utilisation of MMR, that the combination of methodologies forms part of the initial design and is not implemented retrospectively (Curry & Nunez-Smith, 2014).

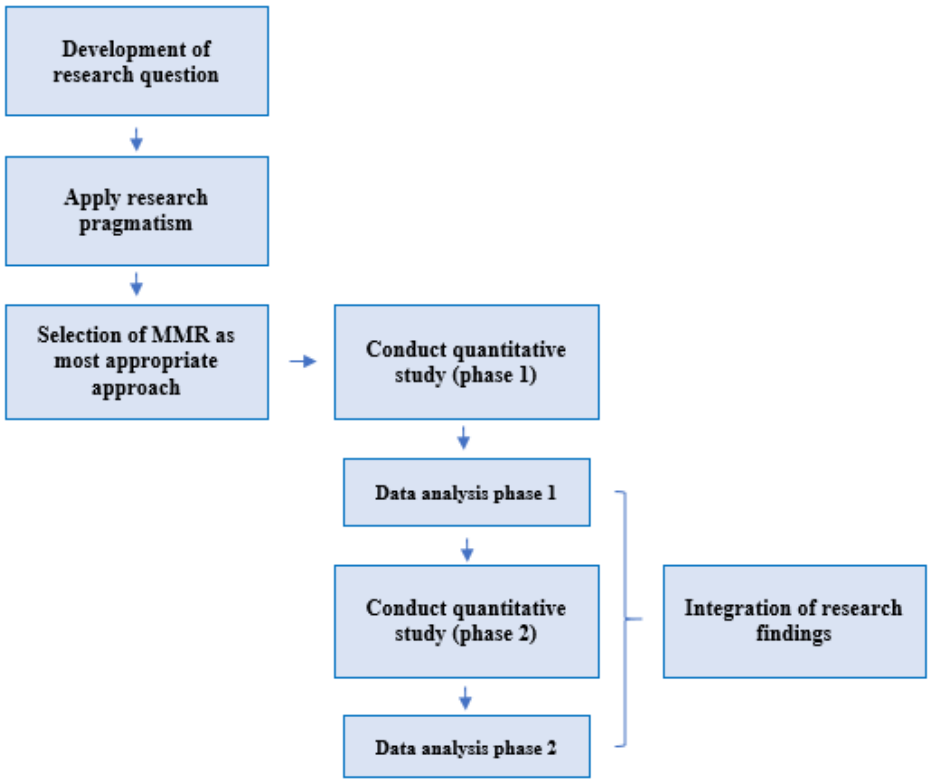
In the designing of this Thesis, it was important to apply research pragmatism and consider the strengths and limitations of both quantitative and qualitative approaches. EDs are complex health issues, the components of which may not be explored with quantitative data alone. At the same time qualitative methods do not aim to and cannot establish representative findings. Quantitative methods are also able to demonstrate associations of statistical significance between variables, while qualitative data further offers the opportunity to probe an identified association. Fairburn and Beglin (1994) explored the complications that arise when applying a solely quantitative or qualitative approach to the field of EDs, and found that when assessing disordered eating traits by self-report questionnaire versus guided interview, responses varied depending on whether they were collected quantitatively or qualitatively. Although self-report (quantitative) enabled participants to maintain their

anonymity where they were more likely to report on ED behaviours without judgement, it did not allow for clarification of what justified an ED behaviour (e.g., what constitutes a *binge episode*). Conversely, interviews (qualitative) allowed researchers to prompt further discussion with participants and to clarify certain concepts where necessary, though these were limited by the potential for participants to conceal certain information due to embarrassment (Fairburn & Beglin, 1994).

Consideration of the strengths and weaknesses of singular methodologies, together with the demonstrated usefulness of MMR designs resulted in the application of a mixed-methodological approach in this Thesis to explore what is a complex area of inquiry. Figure 2–1 outlines the steps involved in implementing this approach.

Figure 2–1

Sequential, Multi-Phase MMR Design



This sequential, multi-phase design, whereby results from a quantitative study were further explored using qualitative methods, enabled the thorough exploration of the overarching research questions guiding this Thesis. The results of this detailed inquiry are presented in the proceeding chapters.

Chapter 3: A Systematic Review of the Literature

3.1 Overview

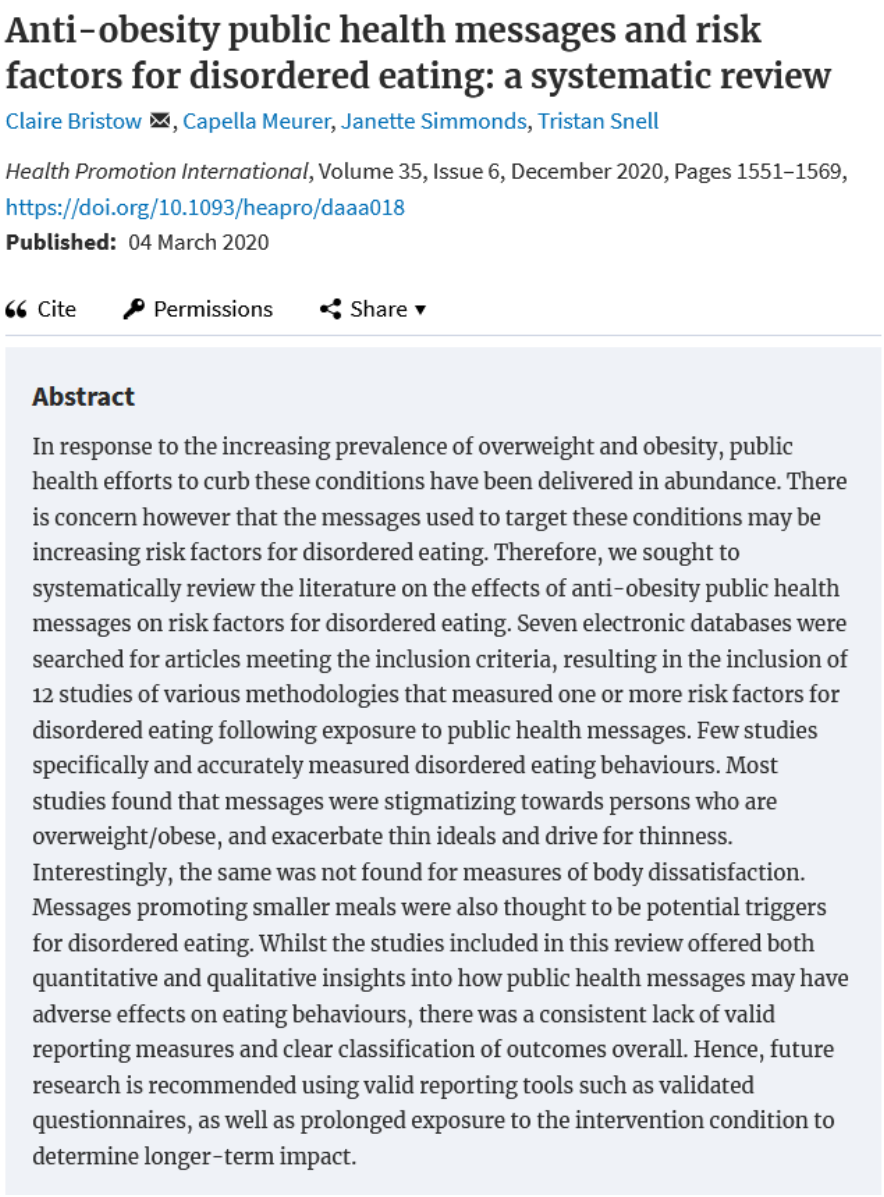
The preceding chapters provided the context within which the research studies of this Thesis are based. In Chapter 1, eating disorders (EDs) were highlighted as important health issues which carry serious health consequences. It was also identified that there has been little investigation of the influence and/or effects of anti-obesity public health messages (PHMs) on risk factors for EDs in the empirical literature. The first step to address this gap in the literature was to conduct a systematic review; in doing so, the extent of current knowledge and pertinent gaps in that knowledge would be identified. A systematic literature review (SLR) was chosen over other forms of reviews (e.g., scoping, narrative) as SLRs provide the most pragmatic, structured, and transparent approach to reviewing the literature that enables future research to replicate this process if or when necessary.

The main objective of this SLR was to provide an overview of the existing literature investigating public health anti-obesity campaigns and their effect on ED related factors. To our knowledge, a review of this nature had not previously been performed. Given the scarcity of research in this area, both quantitative and qualitative studies were included. It is due to this heterogeneity that a meta-analysis could not be performed. The databases selected (Cochrane, Medline, ProQuest, PsycINFO, SAGE, Scopus, and Web of Science) were chosen due to their potential to retrieve articles from relevant subject fields. The search strategy, consisting of a combination of both key words and Medical Subject Headings (MeSH) (Appendix C), was carefully designed in an attempt to identify any articles related to the topic of interest, combined with the knowledge of keywords of already existing studies. The inclusion/exclusion criteria applied was rigid, to ensure that only studies specifically measuring the independent variable (anti-obesity PHMs) and dependent variable (ED risk

factors) could be included. Only evidence-based risk factors, such as those identified in Chapter 1, were included (e.g., poor body image, weight stigma, thin internalisation).

This review was published in Health Promotion International Journal (HPI) in 2020. According to the journal-ranking website Scimago (www.scimagojr.com), HPI is a Q1 ranked journal in the field of Social Sciences, and a Q2 ranked journal in the fields of Public Health, Environmental and Occupational Health, with an H-Index factor of 82. The full manuscript presents the review process and findings in detail. Following the manuscript, a chapter summary is provided.

3.2 Published Manuscript



Anti-obesity public health messages and risk factors for disordered eating: a systematic review

Claire Bristow ✉, Capella Meurer, Janette Simmonds, Tristan Snell

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Abstract

In response to the increasing prevalence of overweight and obesity, public health efforts to curb these conditions have been delivered in abundance. There is concern however that the messages used to target these conditions may be increasing risk factors for disordered eating. Therefore, we sought to systematically review the literature on the effects of anti-obesity public health messages on risk factors for disordered eating. Seven electronic databases were searched for articles meeting the inclusion criteria, resulting in the inclusion of 12 studies of various methodologies that measured one or more risk factors for disordered eating following exposure to public health messages. Few studies specifically and accurately measured disordered eating behaviours. Most studies found that messages were stigmatizing towards persons who are overweight/obese, and exacerbate thin ideals and drive for thinness. Interestingly, the same was not found for measures of body dissatisfaction. Messages promoting smaller meals were also thought to be potential triggers for disordered eating. Whilst the studies included in this review offered both quantitative and qualitative insights into how public health messages may have adverse effects on eating behaviours, there was a consistent lack of valid reporting measures and clear classification of outcomes overall. Hence, future research is recommended using valid reporting tools such as validated questionnaires, as well as prolonged exposure to the intervention condition to determine longer-term impact.

The above screenshot is evidence of the published manuscript (abstract; Health Promotion International, March 4 2020). Evidence of the remainder of the manuscript is provided in Appendix B. The following text presents the manuscript word for word with the exception of references to the present Thesis Appendices where necessary. Table numbers have also been amended to correspond to the Thesis chapter. The journal's preferred referencing style has been maintained.

3.2.1 Abstract

Objective: In response to the increasing prevalence of overweight and obesity, public health efforts to curb these conditions have been delivered in abundance. There is concern however that the messages used to target these conditions may be increasing risk factors for disordered eating. Therefore, we sought to systematically review the literature on the effects of anti-obesity public health messages on risk factors for disordered eating.

Methods: Seven electronic databases were searched for articles meeting the inclusion criteria, resulting in the inclusion of 12 studies of various methodologies that measured one or more risk factors for disordered eating following exposure to public health messages.

Results: Few studies specifically and accurately measured disordered eating behaviours. Most studies found that messages were stigmatising towards persons who are overweight/obese, and exacerbate thin ideals and drive for thinness. Interestingly, the same was not found for measures of body dissatisfaction. Messages promoting smaller meals were also thought to be potential triggers for disordered eating.

Discussion: Whilst the studies included in this review offered both quantitative and qualitative insights into how public health messages may have adverse effects on eating behaviours, there was a consistent lack of valid reporting measures and clear classification of outcomes overall. Hence, future research is recommended using valid reporting tools such as validated questionnaires, as well as prolonged exposure to the intervention condition to determine longer-term impact.

Keywords: Eating disorders, eating and feeding disorders, overweight, obesity, public health

3.2.2 Introduction

Public health campaigns targeting overweight and obesity have increased dramatically over the past few decades, concurrent with the rising prevalence of these conditions (Saguy and Riley, 2005; Walls et al., 2011; World Health Organisation (WHO), 2018). Typically, these campaigns involve a message, or series of messages, directed at a particular behaviour associated with obesity (e.g., excessive energy intake) along with the potential consequences of being overweight or obese (i.e. diabetes or cardiovascular disease) (WHO, 2018). These are referred to as public health messages (PHMs) and, whilst well intentioned, have attracted criticism over their lack of effectiveness as well as potential adverse effects (Salas, 2015; Watson, 2011).

Firstly, the effectiveness of weight-loss efforts is contentious, with research to suggest that weight regain is probable (Blomain et al., 2013; P. MacLean et al., 2015; Mann et al., 2007; Melby et al., 2017). That is, even if weight loss is initially successful, many dieting efforts are ultimately futile (Tomiyama et al., 2013; Tsai and Wadden, 2005). Additionally, there is concern that society's major focus on weight-based outcomes is contributing to the increasing prevalence of body dissatisfaction and eating disorders seen today (Brownell and Rodin, 1994; Couch, Fried and Komesaroff, 2018; Patton et al., 1997; Szwarc, 2003).

Eating disorders (EDs), including Anorexia Nervosa (AN), Bulimia Nervosa (BN), Binge Eating Disorder (BED) and Other Specified Feeding and Eating Disorders (OSFED) (American Psychiatric Association, 2013), are of serious public health concern given their increasing prevalence and major health risks, including: Hypotension, cardiac abnormalities, depression, suicidal behaviour, kidney and/or heart failure and osteoporosis (American Psychiatric Association, 2013; Watson et al., 2010). Further, Australian data demonstrate that AN maintains the highest mortality rate of any psychiatric illness, with an economic cost of treatment per episode second only to cardiac bypass surgery (Watson et al., 2010).

Researchers have suggested that whilst previously treated as separate conditions, obesity and EDs are interrelated. According to the National Eating Disorders Collaboration (NEDC, 2017) and Darby et al. (2009), the rates of comorbid obesity and EDs have increased more than either condition alone. There is also literature suggesting these conditions share multiple risk factors, including body dissatisfaction and unhealthy weight control/dieting practices (da Luz 2017, Darby et al. 2007, Haines & Neumark-Sztainer 2006, Irving & Neumark-Sztainer 2002). Disordered eating behaviours have also been shown to contribute to the development of obesity, and vice versa (da Luz et al. 2017, Darby et al. 2007, Puhl & Suh 2015a). Additionally, the prevalence of obesity with comorbid BED has increased significantly since 1995 (da Luz et al. 2017). That is, overweight and obese individuals have high rates of binge eating and have been found to engage in unhealthy weight practices (Irving & Neumark-Sztainer 2002, NEDC 2010, Puhl & Suh 2015a). Neumark-Sztainer et al. (2002) also found alarmingly high engagement in dangerous weight-control practices by overweight and obese adolescents (diet pills, laxatives, vomiting etc.). Hence, as increasing focus ensues alongside a rising prevalence of overweight, obesity, and EDs, integrated prevention is both warranted and possible to achieve (Haines & Neumark-Sztainer 2006, Irving & Neumark-Sztainer 2002, NEDC 2010, NEDC 2017, Neumark-Sztainer 2016). For example, a randomised control trial by Wilksch and colleagues (Wilksch et al. 2015) found that a school-based intervention in year 7-8 students was effective in reducing both eating disorder and obesity risk factors simultaneously. Alternatively, addressing them independently may actually detract from the success of either one (NEDC 2010).

Evaluations of weight-loss interventions have suggested that professionally administered programs with adequate monitoring and supervision do not further contribute to disordered eating behaviour (Butryn and Wadden, 2005; Da Luz et al., 2015). However, a comprehensive review by the NEDC found that in most cases, ED related outcomes are not

sufficiently measured or reported (NEDC, 2017). A study by Davison and Deane (2010) that did sufficiently measure ED risk factors found that encouraging weight reduction via physical activity increased weight and body concerns. Sim and colleagues also reported two case studies in which eating disorders developed following adolescents' weight loss efforts (Sim, Lebow and Billings, 2013). A similar effect has been seen in the media, with studies in female populations showing that restrained eaters tend to restrict food intake following exposure to slim models and diet products (Anschutz et al., 2008; Boyce and Kuijer, 2014). Body satisfaction has also been shown to decrease following exposure to media images (Bessenoff, 2006; Yamamiya et al., 2005), an effect that seems to be increasing following the proliferation of social media (Holland and Tiggemann, 2016).

The impact of PHMs however is less known, though there is growing concern that they may contribute to the existing stigma and bias towards persons who are overweight. L. Maclean et al. (2009) argue that PHMs further exacerbate weight biases experienced by persons who are overweight or obese by implying that the individual is solely responsible for their own health condition. This is echoed by Guttman and Salmon (2004), who warn that blaming an individual for their health condition whilst failing to acknowledge external and environmental influences is potentially unethical. Recently, an Australian public health obesity campaign which used confronting imagery about 'toxic fat' was also subject to criticism, with the authors concluding that the campaign used questionable tactics to incite disgust and fear among the public, as well as reinforcing fat stigma (Couch, Fried and Komesaroff, 2018). This is of concern given public health researchers have recently deemed the use of stigma in combatting obesity unethical (Pausé, 2017). Further, the employment of shame and guilt as motivators for change may risk the creation of both physical and emotional ill health, interfering with overall efforts to reduce the conditions they target (Becker, 1993; Puhl and Heuer, 2010).

Weight stigma has been found to increase an individual's risk of disordered eating (Puhl and Latner, 2007; Puhl and Suh, 2015a; Thomas S.L et al., 2008), particularly BED (Carels et al., 2010; Durso et al., 2012; Puhl and Suh, 2015b; Schvey et al., 2011). Recently, O'Hara and colleagues found that eating disorder symptoms were positively associated with internalised weight stigma (O'Hara et al, 2016). Mensinger et al. (2016) also found significant interactions between weight stigma and disordered eating behaviours irrespective of BMI (kg/m^2). Additionally, stigma towards people with larger bodies may reinforce the portrayal of the *thin ideal*. The thin ideal refers to the glorification of the slim body types typically celebrated by society. Some argue that this continued endorsement of the social desirability of thinness may further contribute to the mistreatment of people who are obese (Walls et al., 2011), and fuel our obsession with body weight and shape, potentially triggering the development of eating disorders (Kilbourne, 1994; Thompson J.K. and Stice, 2001). A qualitative study of persons with obesity and their perception of the thin ideal found participants express concerns that the continued portrayal of thinness in the media is 'overwhelming', dangerous, and leads to unhealthy dieting, particularly among young persons (Couch, Thomas, Lewis, Blood, Holland and Komesaroff, 2016). A lack of representation of larger bodies in the media was also believed to further reinforce this ideal (Couch et al. 2016).

Given these risks, public health campaigners must consider whether the messages they are promoting are inadvertently reaching audiences for which they are not intended, as emphasised by Guttman and Salmon (2004). In this instance, PHMs targeting overweight and obesity, which are often implemented on a large-scale population level, may negatively affect persons who are already body-conscious and engaging in weight control behaviours. As unhealthy weight control behaviours often predict long-term disordered eating (Neumark-Sztainer et al., 2006), it is important to consider the ways these messages may be received,

especially by vulnerable populations such as young women (Watson et al., 2010). This concern has been addressed by the NEDC which compiled a list of potential harms that may result from public health efforts to reduce obesity including overemphasis on weight/BMI as a primary measure of health and moralisation of food and eating (Watson, 2011). The authors stated that "while addressing these issues [obesity], care must be taken not to cause unintended harm, such as increasing vulnerability to onset of eating disorders or disordered eating, or exacerbation of the risk factors that may predispose to these conditions*"* (Watson, 2011, p.1). This is reiterated by O'Dea (2004), affirming that one of the most essential principles of obesity prevention should be, as with other health-related interventions, "first, do no harm".

As dieting is the single strongest risk factor for disordered eating (Watson, 2011; Watson et al., 2010) and females with severe dieting habits are 18 times more likely (moderate female dieters 5 times more likely) to develop an eating disorder (Watson, 2011), the potential consequences of current public health efforts to reduce obesity should be considered, and the perceived benefits weighed against the potential risks. Whilst the adoption of healthy eating habits needs to be considered in order to address overweight and obesity, there is clearly a fine line between healthy weight control and the development of disordered eating.

Existing literature has explored PHMs in terms of effectiveness, impact and persuasiveness by way of content analysis and narrative review (Cismaru and Lavack, 2007; Dixon et al., 2015a; Randolph and Viswanath, 2004). Additional systematic and critical reviews have also explored the influence of weight loss interventions, mass media and the thin-ideal on body dissatisfaction and disordered eating (Carr and Peebles, 2011; Butryn and Wadden, 2005; Da Luz et al., 2015; Groesz et al., 2002; Lopez-Guimera et al., 2010). However, to our knowledge, a systematic review of the influence of PHMs on risk factors for

EDs has not been undertaken. Therefore, the authors aimed to systematically search and then review the existing literature on PHMs and eating-disorder-specific related outcomes.

3.2.3 Methods

Search Strategy

A systematic search of the literature was conducted for articles published between January 1960 and November 2018. Seven databases were searched: Cochrane, Medline, ProQuest, PsycINFO, SAGE, Scopus and Web of Science. A combination of keywords and subject headings (MeSH) were used. Keywords included but were not limited to: "Public health" or "health promotion" or "public health campaign" and "obesity" or "overweight" or "weight loss" and "eating disorder*" or "restrict*" or "bulimi*" or "diet*". MeSH headings varied across databases, including: Health promotion, mass media, social marketing, weight management, obesity, eating disorders, binge eating, body image. Grey literature was excluded to maintain study reliability. For the detailed search strategy, refer to Appendix C.

Inclusion/Exclusion Criteria

Studies that specifically measured the influence of an anti-obesity public health message on risk factors for, or diagnosis of, EDs were included. Risk factors include: Negative body image, poor self-esteem, weight stigma, thin internalisation and/or unhealthy weight control behaviours (i.e. restricting food intake, bingeing and/or purging). Eating disorders include those specified by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5, American Psychiatric Association, 2013) including: AN, BN, BED and OSFED. Studies not involving participants were excluded (i.e. content analysis). As a review of this nature has not been performed before, the authors felt it important to include both quantitative and qualitative research designs to allow for the retrieval of as much data in this field as possible.

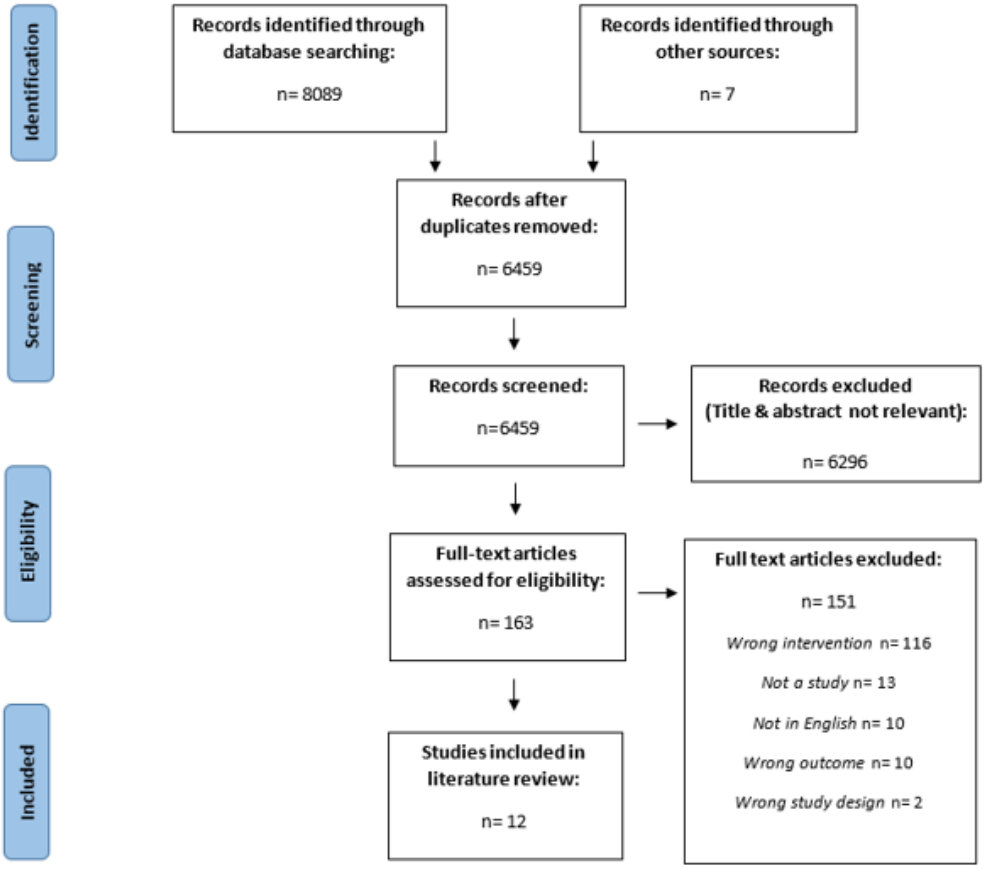
Additionally, it was essential for studies to specifically refer to either a real or mock-up PHM or campaign. That is, one endorsed by or similar to official government or health promotion bodies. As such, any other form of mass media including weight-loss company advertisements, magazines, TV shows, film, newspaper/media articles or image-only content were excluded. Also, studies were required to adequately measure an outcome related to known ED risk factors (such as those listed above), and so those including ratings of likeness or message preference, as well as basic reactions to messages were excluded. Studies that simply measured intentions to eat a healthy diet or choose a healthy snack were also excluded. Though some research does link healthy eating intentions to the development of disordered eating (Golden et al., 2016; Sim et al., 2013), this association was not clear in the excluded papers. Additional exclusion criteria were 'not a published study' (e.g., abstracts, conference proceedings, opinion pieces etc.) and articles not in English.

Articles were screened using the reference manager software Covidence ©. First pass screening (title and abstract) was performed by a single reviewer (CB). Full text papers (2nd pass) were screened and inclusion/exclusion determined by two reviewers (CB, CM). Any discrepancies in votes were discussed until a unanimous decision was reached. All included articles underwent data extraction, followed by quality assessment using the Mixed Methods Appraisal Tool (MMAT, Pluye et al., 2011) (Table 3–1, Appendix D, F.) This tool was used as a guide only, as some methodologies did not fit perfectly into the criteria set out by the MMAT (e.g., some methodologies fit within multiple categories so a combination of criteria were used). Studies were also graded against the National Health and Medical Research Council (NHMRC Australia) Levels of Evidence Guidelines; a comprehensive tool for assessing the strength of research studies (NHMRC, 2009) (Table 3–1, Appendix E, F).

3.2.4 Results

Figure 3–1

PRISMA Flow of Included and Excluded Studies



Of the 8089 studies retrieved from the initial database search, 12 studies were included in this review (Figure 3–1). Due to the heterogeneity of included studies, and inconsistent reporting methods, a meta-analysis could not be performed. Table 3–1 provides a summary of included studies and their main characteristics. Studies were published between 1989-2017, the majority of which involved adult participants (n 9). The remaining studies were conducted with adolescents (n 2) and family groups (n 1). Two (n 2) involved female participants only. The most common setting was online (n 5), followed by educational setting (n 4), telephone (n 1), home (n 1) and undefined (n 1). Seven (n 7) took place in the USA, four (n 4) in Australia and one (n 1) in Canada. Study designs were diverse and can be found in Table 3–1.

Table 3–1

Summary of Included Studies

Reference	Country	Design & setting/level of evidence[a]	Participants (completers) & demographics	Intervention (IV) description	C	Main outcomes & results	Quality assessment[b]
Barry et al., 2014	USA	RCT Online survey/ II	n 1699 (n 1677) *Gender: F= 0.506, M= 0.494 Age: 18-29= 0.252, 30-44= 0.315, 45-59= 0.340, 60+ = 0.093 BMI category: UW= 0.011, HW= 0.291, OW= 0.264, OB =0.434 *Only weighted values provided	VIDEOS (slightly altered from real video campaigns) 3 different IV conditions: 1) A female child talking about hypertension as a consequence of being overweight 2) A male child talking about being bullied as psychosocial consequence of being overweight 3) Female child with mother's voice-over talking about her role in child's weight problem Participants randomised to IV group 1, 2, 3 or control	Y	Ratings of obese children as lazy vs. motivated and stupid vs. smart (stigma-7-point Likert scale) Feelings towards obese children (reported on VAS - feelings ranging from 'cold' to 'warm') Exposure to IV led to LESS stigmatising ratings compared to control (p= <0.05) and higher ratings of warmth towards obese children (p= <0.01) Obese participants and women gave significantly more favourable ratings (p= <0.05)	****
Dixon et al., 2015	Australia	Randomised experiment Online survey form/ III-3	n 1116 Gender: F= 50% BMI category: HW= 49%, OW/OB= 51% Age: 21-29= 49%	TV ADS (from real campaigns) Categorised as: 1) Health consequences 2) Supportive/ encouraging 3) Social norms/acceptability Execution style: 1) Graphic (pictures i.e. diseased organ) 2)Simulation/animation 3) Positive testimonial (personal narrative)	N	Stigma (referred to as 'negative emotions') measured by feelings of disgust, shame, anxiety, fear, guilt and sadness (measured on 7-point Likert scale) 'Toxic Fat' ad (graphic) resulted in significantly stronger negative emotions than other ad types (n p value given) OW and OB participants had significantly higher negative	***

Reference	Country	Design & setting/level of evidence[a]	Participants (completers) & demographics	Intervention (IV) description	C	Main outcomes & results	Quality assessment[b]
				4) Negative testimonial (personal narrative) 5) Depicted scene (by actors) Participants randomised to view 4/8 messages		impact associations for 'Toxic Fat', 'Measure Up' (health consequence) and 'Piece of String' (health consequence) ads (p= <0.001, <0.01 and <0.01 respectively)	
Dooley et al., 2010	Canada	Randomised pre-post experiment Community groups/ II	n 95 Gender: F= n 50, M= n 45	PRINT ADS (from real campaigns) Categorised as: 1) Body image- "take a small step to get healthy" with image of female body 2) Health benefit- "used regularly, it can help fight cancer" with image of soccer ball 3) Positive experience- "fruits and vegetables take the best of us" with images of fruits and vegetables Participants randomised to IV group 1, 2, 3 or control	Y	State self-esteem (measured using SSES*), and weight attitudes (including stigma- measured using AAWAD*) NS effect of IV conditions on weight attitudes NS effect of IV conditions on self-esteem	***
Lewis et al., 2010	Australia	Qualitative interviews Telephone/ N/A	n 142 Gender: F= n 106, M= n 36 Age: mean= 44.8 (19-75 year olds) BMI category: 30-39.99 (kg/m2)= n 88 (62%), ≥ 40 (kg/m2) n= 54 (38%)	INTERVIEW QUESTIONS 1) What do you think about the range of public health messages that are currently around about obesity? What do you think is the key message they are giving? 2) Do you think the messages in these campaigns apply to you? How so? What about the general population?	N	Qualitative responses to interview questions (See in text for quotes) Many felt focus on health consequences of being fat amplified guilt, blame and shame Many reported campaigns do not motivate them to lose weight but rather make them feel like failures Majority agreed messages need to shift from weight and	***

Reference	Country	Design & setting/level of evidence[a]	Participants (completers) & demographics	Intervention (IV) description	C	Main outcomes & results	Quality assessment[b]
				3) Do these types of messages impact on your feelings about your weight? Why? 4) Do you think public health messages about obesity need to be changed? Why?		BMI focus to overall health and be less stigmatising to obese individuals Most women spoke about impact of societal reactions including messages about obesity on their emotional wellbeing	
Morley et al., 2016	Australia	Pre-post campaign evaluationSurvey form/ IV	Pre-exposure n 2012 (**IV** n 1003, **C** n 1009) Follow up wave 1 n 2005 (**IV** n 1002, **C** n 1003), Follow up wave 2 n 2009 (**IV** 1001, **C** 1008) Gender: Baseline: **IV** F= 54.9% **C** F= 54.7%, Wave 1: **IV** F= 55.2%, **C** F= 55.1% Wave 2: **IV** F=55.0%, **C** F= 55.4% Age: Baseline: **IV** 35-44= 40.4%, **C** 35-44= 38.9% Wave 1: **IV** 35-44= 41.1%, **C** 35-44= 40.6% Wave 2: **IV** 35-44= 38.1%, **C** 35-44= 36.3% BMI category: Baseline: **IV** HW= 41.8%, **C** HW= 43.1% Wave 1: **IV** HW= 45.7%, **C** HW= 44.1%, Wave 2: **IV** HW= 44.8%, **C** HW= 44.3 *Age categories included:	VIDEO AND PRINTS ADS (from real campaigns) Principal ad (1): Graphically depicts visceral ('Toxic Fat') around overweight person's organs Supporting ads (4): Reminders of the visceral images with 'how' change messages such as small achievable diet/PA changes IV state (Western Australia) compared to control state (Victoria)	Y	Thoughts about weight and health, perceived urgency to lose weight (measured on 10-point Likert scale) and overweight stereotypes (stigma- composite scale measured whether participants agreed or disagreed with stereotypes) Overweight stereotypes and weight attitudes did not differ significantly between pre- and post- exposure	****

Reference	Country	Design & setting/level of evidence[a]	Participants (completers) & demographics	Intervention (IV) description	C	Main outcomes & results	Quality assessment[b]
			25-34, 35-44, 45-49, BMI categories included: UW, HW, OW, OB				
Puhl et al., 2013a	USA	RCT Online survey form/ II	1085 Gender: F= n 536 M= n 533 Age: mean 45.7 BMI category: HW= n 381 (37.6%), OW= n 319 (31.5%), OB= n 312 (30.8%)	PRINT ADS (from real campaigns) 10 publicly criticised obesity-related health campaigns Example of messages: 1) Don't Drink Yourself Fat- A person's hand pours body fat from soft drink bottle, text reads "are you pouring on the pounds? Don't drink yourself fat. Cut back on soda and other sugary beverages. Go with water…" Participants randomised to IV condition or control (10 neutral ads)	Y	Stigma (measured on a 5-point Likert scale) including questions regarding whether ads promote negative stereotypes, increase blame, stigmatise overweight/obese persons, increase dislike towards overweight/obese persons, are disrespectful or insulting IV ads rated as significantly more stigmatising than control (p= <0.001)	****
Puhl et al., 2013b	USA	Randomised experiment Online	n 1014 Gender:	PRINT ADS (from real campaigns)	N	Stigmatisation of obese persons (measured on a 5-point Likert scale)	***

Reference	Country	Design & setting/level of evidence[a]	Participants (completers) & demographics	Intervention (IV) description	C	Main outcomes & results	Quality assessment[b]
		Survey form/ III-3	F= n 500 (50.2%), M= n 497 (49.8%) Age: mean 46.1 BMI categories: UW= n 36 (3.6%), HW= n 367 (36.5%), OW= n 336 (33.4%), OB= n 266 (26.5%)	30 messages in total, targeting topics such as; sugar sweetened beverages, portion sizes, fruits and vegetables, PA, personal empowerment, parents, and stigma. Statements were those such as "cut down on sugary drinks", "skip seconds...lose your gut", "the more you gain, the more you have to lose", "childhood obesity is child abuse" etc. Participants randomly allocated to view 10 messages only		'Childhood obesity is child abuse', 'being fat takes the fun out of being a kid' and 'fat kids become fat adults' rated as the most stigmatising messages (p= <0.05) "You have the strength to take control of your health", Fat kids become fat adults" and "The temptation to eat unhealthy food is hard to fight, but it's a fight that you and your community can win" were considered significantly more stigmatising by OB but not OW participants (p value not provided)	
Roehrig et al., 2007	USA	Randomised pre-post experiment Classroom/II	n 139 (n 123) (Pro-dieting n 46, anti-dieting n 37, control n 40) Female undergraduate students aged between 18-30 BMI categories: UW= 6.5%, HW= 61.9%, OW= 15.1%, OB= 16.5%	MOCK UP MESSAGES (based on health information from relevant agencies) 1) Pro-dieting message- 'Lose weight/maintain low body weight' headline (obesity prevention) 2) Anti-dieting message- 'Stop dieting, accept body weight' message headline (ED prevention) Participants were tested at baseline, post-test and 2 week follow up	Y	Body dissatisfaction (measured using EDI-BD* and VAS), thin-ideal internalisation (measured using SATAQ-3*), sociocultural pressure for thinness (measured using SATAQ-3*), drive for thinness (measured using EDI-DT*), dieting restraint (measured using DEBQ-RS*), negative affect (measured using PANAS-X*), bulimic symptoms (measured using EDE-Q*) and eating disorder screening (EDI-3*) Between groups: Perceived pressure to diet greater in pro-diet condition	***

Reference	Country	Design & setting/level of evidence[a]	Participants (completers) & demographics	Intervention (IV) description	C	Main outcomes & results	Quality assessment[b]
						vs. ED prevention and control (p= <0.0001) Dieting intentions greater in pro-diet condition vs. ED prevention and control (p= <0.0001) Thin internalisation greater in pro-diet condition vs. ED prevention and control (p= <0.0001) Bulimic intentions lesser in anti-diet vs. pro-diet and control (p= <0.05) NS difference in body dissatisfaction Pre-post: Perceived pressure to diet decreased in anti-diet and control condition (p= <0.001)	
Shaw and Kemeny 1989	USA	Mixed methods *Part A*= Quantitative survey/ IV *Part B*= Qualitative focus groups/ N/A	n 627 Female high school students Grade 10= n 247 (39%) Grade 11= n 230 (37%) Grade 12= n 150 (24%)	MOCK UP POSTERS (displayed in video sequences) 1) 'Slim' message: Fitness Today: For a Slimmer Tomorrow 2) 'Health' message: Fitness Today: For a Healthier Tomorrow 3) 'Active' message: Fitness Today: For a More Active Tomorrow 3 different models appeared alongside text (below average weight, average weight and above average weight) Overall 18 posters: 3 x messages, 3 x models, 2 x	N	Quantitative: Desired weight and satisfaction with weight, self-esteem (measured using Rosenberg SES*) Qualitative: 'Discuss how girls would react to the poster' Quantitative: Scores not provided- were implemented as variable factors not outcomes (See in text for quotes) Girls reported the most important reason for fitness was to lose weight or keep slim, and	**

Reference	Country	Design & setting/level of evidence[a]	Participants (completers) & demographics	Intervention (IV) description	C	Main outcomes & results	Quality assessment[b]
				poses)- participants viewed all posters		slimness was considered more important than fitness Majority believed emphasis on thinness was discouraging, and would make girls self-conscious, and emphasized the thin ideal	
Simpson et al., 2017	USA	RCT with pre-post measures/ II	Phase 1 (baseline)= n 859 Phase 2 (post)= n 733 Phase 3 (follow up)= n 693 (n 434) Gender: F= n 316 (72.8%) M= n 118 (27.2%) Age: mean 19.46 BMI: mean 24.19 (ranged from 16.43-48.73)(kg/m2)	VIDEOS (from real campaigns) 5 weight-centric obesity related public health campaigns Participants randomised to IV or control (5 non-weight centric videos)	Y	Body dissatisfaction and shape concern (measured using EDE-Q*), influence of societal influences on body image, appearance standards and eating behaviours (measured using SATAQ-3*), message stigmatisation (measuring on a 5-point Likert scale) Body dissatisfaction and shape concern scores LOWER at post and follow-up regardless of condition (p= <0.001) Thin internalisation increased regardless of condition (p= <0.001) IV resulted in greater negative evaluations and self-efficacy (p= <0.001) No result provided for stigma ratings	****
Thomas et al., 2014	Australia	Qualitative interviews/ N/A	150 family groups (comprised of 159 parents and 184 children) *Parents:* Gender: F= 82%, M= 18% Age:	TV ADS (from real campaigns) 'Measure Up'- involves a video of a person's expanding waistline and a tape measure motioning more danger as the waist circumference get larger	N	Perceptions, reactions and interpretations of primary and secondary messages within campaigns, i.e. "What do you think is the main message in that advertisement?" and "Did	***

Reference	Country	Design & setting/level of evidence[a]	Participants (completers) & demographics	Intervention (IV) description	C	Main outcomes & results	Quality assessment[b]
			mean 44.7 BMI: mean 28.4 (range 18.6-57.2) *Children:* Gender: Equal boys and girls (n not supplied) Age: mean 13.5 BMI: mean 20.0 (range 14.2-37.1)(kg/m2)	'Swap It'- an animated video that discusses healthy behavioural swaps		you dislike anything about those messages?" (Check in text for quotes) Many parent participants (authors state between 25-50%) believed the Measure Up campaign stigmatised individuals who were obese Younger children also noted strong moral messages and that fatness is 'bad' and weight loss is 'good' and 'healthy' Many children had a strong negative reaction calling the campaign "scary", "sad", "negative", "depressing" or "defeatist" Some older children said the advertisement would make overweight or obese people feel "guilty", "ashamed", "self-conscious" and "bad" Older children, particularly girls, said that encouraging swapping 'big for small' (meals) could be problematic for persons at risk of engaging in dieting and eating disorders	
Young et al., 2016	USA	2 x 2 between participants experiment Online /III-3	n 188 (n 161) Gender: F= n 86 (52%) M= n 75 (48%) Age: mean 31.1 BMI categories:	MOCK UP ADS (PRINT) 1) Stigmatising image and individual behaviour text 2) Stigmatising image and social determinants text 3) Fast food image and behaviour text	N	Attitude towards obesity (stigma- measured using AAS*) Attitudes to obese persons did not differ for IMAGES between IV type (stigmatising vs. non-stigmatising)	***

Reference	Country	Design & setting/level of evidence[a]	Participants (completers) & demographics	Intervention (IV) description	C	Main outcomes & results	Quality assessment[b]
			<25 (kg/m2) = n 78 (48.4%), 25-30 (kg/m2) = n 41 (25.5%), ≥30 (kg/m2) = n 42 (26.1%)	4) Fast food image and social determinants text Behaviour text: "Bad choices, bad health. People have no self control when it comes to junk food…(cont.)" Social determinants text: "Unhealthy environments. In some neighbourhoods, fast food chains and convenience stores are the only place to buy food…(cont.)" Participants randomly assigned to one of four messages		However, when text AND image considered together, there was a significant difference (p = 0.03) 'Normal weight' participants had more negative attitudes towards obese persons than OW or OB persons (p=0.005)	

[a] According to NHMRC Additional Levels of Evidence and Grades for Recommendations for Developers of Guidelines (qualitative studies are not included in these guidelines)(NHMRC, 2009).

[b] Guided by the MMAT criteria (Pluye et al., 2011); ****= 100% criteria met, ***= 75% criteria met, **= 50% criteria met, *= 25% criteria met.

C= control, F= female, M= male, UW~= underweight, HW~= healthy weight, OW~= overweight, OB~= obese (~according to BMI criteria kg/m2), IV= intervention, PA= physical activity, Y= yes, N= no, NS= non-significant.

AAS= Antifat Attitudes Scale (Lewis, 1997), AAWAD= Attitudes About Weight and Dieting (Crandall, 1994), DEBQ-RS= Dutch Eating Behaviour Questionnaire- Restraint Scale (Van Strien, 1986), EDE-Q= Eating Disorder Examination Questionnaire (Fairburn, 1994), EDI-3= Eating Disorder Inventory 3 (Garner, 2004), EDI-BD= Eating Disorder Inventory- Body Dissatisfaction (Garner, 1983), EDI-DT= Eating Disorder Inventory- Drive for Thinness (Garner, 1983), PANAS-X= Positive And Negative Affect Scale X (D. Watson, 1992), SATAQ-3= Sociocultural Attitudes Towards Appearance Scale 3 (Thompson, 2004), SSES= State Self-Esteem Scale (Heatherton, 1991), SES= Self-Esteem Scale (Rosenberg, 2015), VAS= Visual Analogue Scale.

Stigma

Stigma was the most reported outcome of studies in this review (n 10), either directly (referred to as "stigma") or indirectly (described as "negative perceptions", "shame" or "disgust" etc.). Stigmatisation was generally measured in terms of participants' perceptions of persons who are overweight or obese after exposure to PHMs, or the extent to which participants believed that the message stigmatised persons with overweight/obesity. Most PHMs, particularly those with graphic content, were believed to increase stigma towards persons who are overweight. Qualitatively, participants expressed:

> Most of the harm that comes to overweight people, most of what makes them feel so crappy, basically comes down to being told that they're not good enough and they're worthless. Because when you're fat you're treated like that's all you are and you're never going to amount to anything unless you can get rid of it. (S. Lewis et al., 2010, p.6)

> Someone's going to go into a panic I'm fat, I'm fat, I'm fat. There is enough stigma around about this now… (Thomas et al., 2014, p.5)

Thomas et al. (2014) also found that children believed PHMs portrayed fat as "bad" and that people would feel "guilty" or "ashamed" after viewing ads.

Quantitatively, ads that were considered to be overtly graphic, and have been previously criticised by the public, received significantly higher stigma ratings than those with less confronting content (Dixon et al., 2015b; Puhl et al., 2013a; Puhl et al., 2013b). Ratings of stigmatisation also increased when both image and text were considered stigmatising (Young et al., 2016). Conversely, exposure to PHMs led to significantly lower stigmatising ratings of children who are overweight and obese in one study (Barry et al.,

2014), and two studies found no difference in stigma ratings following exposure (Dooley, et al., 2010; Morley et al., 2016).

Weight status was found to influence stigma ratings, with participants who are overweight/obese rating PHMs as more stigmatising (Barry et al., 2014; Dixon et al., 2015b; Puhl et al., 2013a). In one study (Young et al., 2016) normal weight participants also had stronger negative attitudes towards persons who are obese.

Body and Weight Dissatisfaction, Self-Esteem

Dissatisfaction with body weight and shape was measured and/or discussed in five studies included in this review (n 5, S. Lewis et al., 2010; Roehrig et al., 2008; Shaw and Kemeny, 1989; Simpson et al., 2017; Thomas et al., 2014). One study found no significant effect of PHMs on body dissatisfaction (Roehrig et al., 2008), whilst another found body dissatisfaction to decrease across time (Simpson et al., 2017). Additionally, one study measured weight satisfaction but did not provide relevant outcome data as scores were used as moderating variables only (Shaw and Kemeny, 1989).

Qualitatively, some participants reported that PHMs made them feel like "failures" (S. Lewis et al., 2010). Others thought PHMs were likely to make people feel self-conscious and "bad" about themselves and their bodies (Thomas et al., 2014).

> ...I think that insisting that being thin is healthy is doing more harm than good...Those horrible 'Reduce Your Waist, Reduce Your Risk' ads and stuff need to go away, ... scare tactics can be more damaging than any good (S. Lewis et al., 2010, p.5)

> When you advertise fitness to make you look good, it makes us all think there is something wrong with the way we look (Shaw and Kemeny, 1989, p.684)

No significant effect was found for self-esteem scores in one study (Dooley et al., 2010), whilst self-esteem was only used as a moderating variable in another (Shaw and Kemeny, 1989), thus no data on the effect of the intervention on this outcome is reported.

Drive for Thinness and Thin Internalisation

Thin internalisation was explored qualitatively in one study (Shaw and Kemeny, 1989). Girls expressed that a "slimming" poster suggested that the most important reason for fitness was to keep slim. The majority believed that this emphasis on thinness was discouraging and would make girls self-conscious, and that it emphasised the thin-ideal.

> Yes, it would encourage girls because the girl in the poster is small and slim so it would encourage many young girls who have a weight problem to be this size. We feel that it would encourage many girls to join in physical fitness activities because it would make them want to lose weight more. (Shaw and Kemeny, 1989, p.683-684)

> We don't think this type of poster should be promoting fitness. The girl on it has a really nice skinny body but then the message, Fitness Today: For a Slimmer Tomorrow, makes you think that's all fitness should be, getting slim. Many girls would look at this poster and think, if I go to a fitness class I will look just like the model. (Shaw and Kemeny, 1989, p.684)

Quantitatively, two studies measured thin internalisation (Roehrig et al., 2008; Simpson et al., 2017), with Roehrig et al. (2008) also measuring drive for thinness and dieting restraint. Thin internalisation was significantly greater after exposure to intervention in both studies. Pressure to diet was significantly greater in those exposed to the pro-diet intervention, which ultimately led to higher dieting and weight-control intentions (Roehrig et al., 2008).

Eating Disorder Behaviour

Whilst numerous studies measured important aspects and/or risk factors for EDs such as thin internalisation, body dissatisfaction, self-esteem etc. (see above), only one study measured a specific disordered behaviour, in this instance bulimia (Roehrig et al., 2008). In this study, intentions to engage in bulimic behaviours were lower in the anti-diet condition compared to the pro-dieting and control conditions.

Quantitatively, Thomas et al. (2014) reported that older children, particularly girls, thought that PHMs that encouraged swapping bigger meals for smaller meals could be problematic for persons at risk of engaging in dieting and EDs. No other studies reported specifically on eating disorders.

3.2.5 Discussion

This review sought to explore the influence of anti-obesity PHMs on risk factors for disordered eating, as a review of this kind was missing from the literature. Our findings add to previous concerns that public efforts to curb obesity may be exacerbating risk factors for disordered eating (Couch et al. 2018; Davison and Deane, 2010; Guttman and Salmon, 2004; Maclean et al. 2009; Pausé, 2017; Sim et al., 2013).

One of the most notable findings in this review is that when analysing the literature, it is evident that there is a distinct absence of investigation into this topic. That is, the effect of PHMs on risk factors for disordered eating has rarely been directly or thoroughly measured, and often is discussed only briefly by the authors.

The present review also demonstrates a clear lack of direct measurements for ED outcomes, with only one study providing such a measure (Roehrig et al., 2008). This is consistent with views expressed in a comprehensive review by the NEDC (2017) which

concluded that there is a considerable lack of reporting and use of valid measurement tools when evaluating the risk of ED development during or after weight-loss interventions. A lack of validated measures was also notable in the present review, with many studies using basic Likert scales to measure outcomes. Inconsistencies were also present in the reporting of outcome measures, and measures were often not clearly defined. These inconsistencies were in part due to the lack of validated scales used. Such a lack presented difficulties when assigning data to particular outcomes, such as classifying "weight attitudes" or "shame" and "disgust". With authors often not reporting on each individual measure (i.e. "weight attitudes" as a whole and not in subcategories), the interpretation of results was more difficult, compared to when specific scale data was provided. It is therefore clear that more investigation into this topic is required.

When considering past research on the negative influence of the media, both traditional and social (Groesz et al., 2002; Holland and Tiggemann, 2016), there are consistencies between these findings and those of the present review. That is, exposure to both mass media and anti-obesity PHMs can have adverse effects on audiences, in particular exacerbating thin internalisation and promoting the thin-ideal (Bessenoff, 2006; Harper and Tiggemann, 2008). This is of concern given that greater levels of thin idealisation are associated with greater risk of developing an ED (Stice, 2002; Thompson J.K. and Stice, 2001). Interestingly however, in the two studies measuring body dissatisfaction in this review, one found no change after exposure to PHMs, and one reported a decrease across time. Whilst this contrasts with findings from the aforementioned literature, a previous study has demonstrated similar results to those of this review, finding that exposure to different types of body shapes in the media (thin, neutral, etc.) had no influence on body dissatisfaction in adolescent girls (Champion and Furnham, 1999). It is possible that whilst short-term exposure is enough to incite the thin ideal, body dissatisfaction may be a more progressive

outcome that is established over time (Bucchianeri, Arikian, Hannan, Eisenberg and Neumark-Sztainer, 2013). It is also possible that slim beauty standards are so pervasive in society that exposure is unlikely to have any further impact on an individual's level of body satisfaction. Additionally, whilst body dissatisfaction and desire to lose weight were considered by some studies in this review, most did not directly measure participants' concern for their own weight following exposure to PHMs. This would have been beneficial given weight concern is widely considered a strong contributor to the development of EDs (Gowers and Shore, 2001).

Considering stigma, anti-obesity PHMs were in most cases thought to be largely stigmatising. This is consistent with previous theories (Guttman and Salmon, 2004; L. MacLean et al., 2009) and concerns that such public health efforts only increase health disparities for persons who are overweight/obese (Puhl and Suh, 2015b; Puhl and Heuer, 2010). An exception in this review was the study by Barry et al. (2014) in which positive feelings towards children with obesity actually increased following messages about bullying and psychosocial consequences of being overweight. This could be due to the emotive nature of these messages, which were delivered mostly by children, resulting in feelings of empathy from participants. Interestingly, two studies also reported a non-significant difference between intervention and control conditions (Dooley et al., 2010) or before and after exposure to stigmatising content (Morley et al. 2016). Qualitatively however, there were very emotive expressions about stigma from participants, using words such as "worthless" when explaining how stigma contributes to the portrayal of persons who are overweight/obese. With considerable evidence to suggest that implicit, explicit and internalised weight bias has severe psychosocial effects and enhanced risk of ED development (Carels et al., 2010; Durso et al., 2012; O'Hara et al., 2016), these findings highlight the need for development of less stigmatising messaging in public health efforts.

The use of mixed methodologies in this review provided a comprehensive insight into how PHMs are received, with notable agreements and discrepancies between quantitative and qualitative data. Whilst stigma and thin internalisation were consistent in both quantitative and qualitative data, negative effects of PHMs on self-esteem and body dissatisfaction appeared to be greater in the qualitative descriptions but not quantitative ratings. Research into the most effective methodologies to use when investigating disordered eating related behaviours offers varying perspectives (Black and Wilson, 1996; Grilo, Masheb and Wilson, 2001). Early literature suggests that interviews may be more valid than self-report forms, as without the help of an interviewer, participants' may find it difficult to determine their level of engagement in ED related behaviours (i.e. what level in food intake constitutes binge eating etc.) (Cooper and Fairburn, 1987). However, others have argued participants may be too embarrassed to admit to certain behaviours (such as bingeing or purging) in person, and would be more likely to report these behaviours anonymously via a self-report form (Fairburn and Beglin, 1994). A comparison of these methods was performed by Fairburn and Beglin (1994) who found high agreement between methodologies in outcomes such as dietary restraint, weight and shape concern, but considerable disagreement in binge eating, where higher rates were reported via self-report questionnaire. Hence, it is evident there is validity in both methods, depending on varying factors such as outcomes to be measured, resources, budget etc.

Considering the data included in the present review, those responsible for the creation and dissemination of public health materials addressing obesity need to be cognisant of the potential for such messages to generate negative consequences, especially for persons who are overweight or obese and hence more likely to be sensitive to the stigma attached to PHMs. Whilst this review was limited by a lack of clear and consistent reporting measures, this highlights a lack of enquiry into the issue at hand, with the available evidence provided

in this review justifying further investigation. Future research is recommended using validated reporting measures on specific risk factors and diagnosable outcomes of EDs to enable a deeper understanding of how these conditions may be affected by such obesity prevention efforts. For example, validated questionnaires such as the Eating Disorder Examination Questionnaire, which measures varying disordered eating behaviours such as bingeing, purging and starvation (EDE-Q, Fairburn and Beglin, 1994) and/or the Sociocultural Attitudes Towards Appearance Scale, which measures the extent to which a person internalises the thin-ideal from varying different sources (SATAQ-4, Schaefer et al., 2015) would be of value. Additionally, exposing participants to PHMs for longer periods of time may offer further valuable insight on longer-term impact.

Finally, it is suggested that future PHMs and anti-obesity campaigns avoid imagery and language centring on weight and weight loss, and instead focus on the non-aesthetic benefits of maintaining a healthy weight. It is also recommended that these efforts take an empathetic, rather than blame approach, in order to acknowledge the external influences on one's health, as opposed to the 'lazy' and 'undisciplined' narrative so often implied. Messages that continue to reinforce the narrative of overweight and obesity as 'gross' and the sole fault of the individual only serve to exacerbate the stigma and bias experienced by these members of the population, and continue to portray fatness as something that must be avoided at all costs. Hence, continued effort to shift this focus to an integrated, overall health and wellbeing approach, may help lessen the risk of these messages negatively impacting the individuals who are exposed to them, particularly those most at risk of disordered eating behaviours.

Limitations

Despite the authors' extensive efforts, including systematic searching of databases and manual searching of literature reference lists, it is possible that studies meeting the inclusion criteria may have been missed. Further, only one author performed title and abstract screening despite full-text screening being completed by two authors. Additionally, although a strict inclusion/exclusion criteria was established, the aim of some studies included in this review was not explicitly to measure the influence of PHMs on EDs, hence some outcome data were not provided in detail, limiting the conclusions able to drawn in these instances. This review was also limited by the heterogeneity of the included studies, whereby reporting measures and outcomes were often not consistent.

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3.3 Summation

The present review highlights the need for further investigation into the ways anti-obesity campaigns influence risk factors for EDs. Given the serious nature of EDs and the burden on individuals and the health care system (see Section 1.2 for further detail), it is imperative that further research directly measures how anti-obesity campaigns have the potential to negatively affect audiences, particularly those most vulnerable. Although this review found that anti-obesity PHMs negatively affect risk factors such as weight stigma, body dissatisfaction and thin internalisation, on the whole, the ways in which ED outcomes were measured and explored lacked scientific rigour and clarity. That is, ED outcomes were either not specifically defined, lacked previously validated reporting measures, and/or were a secondary focus in many studies. These findings provided the rationale and scope for the second research study to be presented in this Thesis (Study 2). This study, a quantitative online survey, was designed to directly measure clearly defined ED risk factors with a strong focus on reporting measures and validated psychometric questionnaires that have effectively been applied to similar research studies. This study is presented next in Chapter 4.

Chapter 4: A Quantitative Investigation

4.1 Overview

Through a systematic review of the literature, the previous chapter demonstrated the potential adverse effects of anti-obesity public health messages (PHMs) on risk factors for eating disorders (EDs). The review highlighted the need for original research studies to directly and clearly investigate the influence of exposure to anti-obesity PHMs on audiences. It was also clear that in many studies, the measurement of ED related outcomes was secondary and/or not psychometrically robust, and outcomes were often ill-defined. These findings lay the foundations for the second research study in this Thesis, Study 2. Given the serious nature and increasing prevalence of EDs (Peckmezian et al., 2017; Watson et al., 2010), it was important to gain further understanding and insight into how campaigns centred on anti-obesity sentiment may be exacerbating risk factors for these conditions. Such findings may help inform future research, as well as potentially contribute to recommendations for campaign reform.

This quantitative study was designed to address the identified gaps in the literature by exposing participants to real–world anti-obesity advertising campaigns. An online survey format was chosen as it does not restrict participation to a certain geographical location, and allows for the collection of a large quantity of data from a single form. Known risk factors for the development of disordered eating and EDs were selected as primary outcome measures, in order to directly and specifically measure campaign influence on these variables. A pre-post experimental design was implemented, to enable the detection of any significant changes in measures between participants' baseline and post-exposure scores. Finally, psychometric scales measuring ED risk/symptomology and thin internalisation were included to identify any vulnerable sub-groups of the study sample. Further detail about the study design and

methodology, as well as the published manuscript detailing the study in full, is provided in the proceeding sections. An overarching summary is then presented.

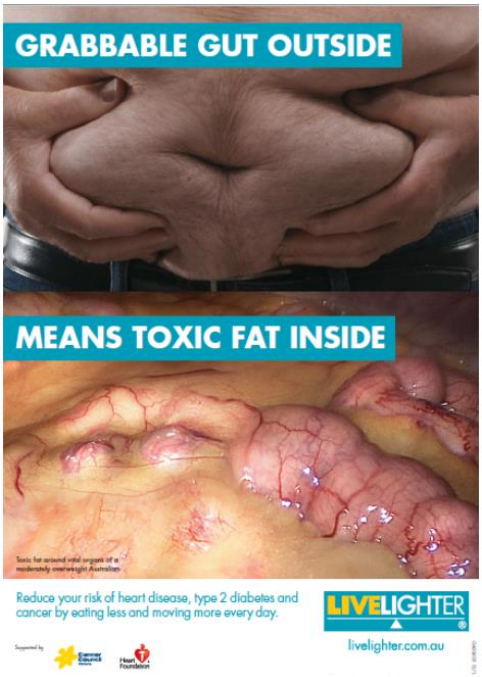
4.1.1 Methodology and Resources

In designing this study, the main objective was to expose participants to real–world anti-obesity campaigns, and subsequently measure the influence of this exposure on risk factors for EDs including satisfaction with body weight (WS), satisfaction with body shape (SS), desire to control weight (WC), desire to control shape (SC) and desire to engage in unhealthy weight control behaviours (e.g., laxative abuse, excessive exercise; UWCB). These primary outcome measures were selected as they are evidence-based risk factors for EDs (Fairburn & Beglin, 1994) and have been implemented in previous related research (Champion & Furnham, 1999; Knobloch-Westerwick & Crane, 2012; Roehrig et al., 2008; Shaw & Kemeny, 1989; Simpson et al., 2017). As these are prominent risk factors for the development of EDs, they were believed to be the most appropriate to indicate the potential harm that may result from campaign exposure. The survey was designed using Qualtrics® software and can be viewed in full in Appendix G.

Firstly, participants were provided with the explanatory statement before answering some basic demographic questions. They then completed baseline primary outcome measures (as listed above), followed by exposure to four real–world anti-obesity public health campaign images, whereby primary outcomes were again measured after each individual exposure. Participants then completed two questionnaires/scales that have previously been validated in measuring ED symptomology/risk and thin internalisation (Eating Disorder Examination Questionnaire; EDE-Q; Appendix H; Fairburn & Beglin, 1994) and Social and Cultural Attitudes Towards Appearance Scale (SATAQ-4; Appendix I; Schaefer et al., 2015). Further detail, including rationale and justification for primary outcome measures and questionnaires is provided in the manuscript (Section 4.2.3).

In selecting the campaigns to be featured in this study, it was important to consider a range of different messaging types, imagery, and context. As the survey was available for completion by English speaking participants globally, campaigns from all English–speaking countries were considered. To be included, campaigns and their associated images needed to directly target overweight/obesity through messages of weight reduction or reference to dieting. Images also needed to be clear and simple to understand, and relatively recent to ensure relevancy (last 10 years). Four images were eventually chosen for inclusion. The images represent a range of different countries, and each take a slightly different approach to conveying the overall message. This variance in message style and imagery used was intentionally chosen to enable comparing and contrasting between different campaign types, as well as determining any country–specific effects. Each campaign image is provided on the following page. Following this, the manuscript is presented in full, including results and discussion sections.

Image 1: Live Lighter Campaign (Australia)



[https://livelighter.com.au/assets/resource/poster/HFWA00023%20-%20Campaign%20poster%20A4.pdf]

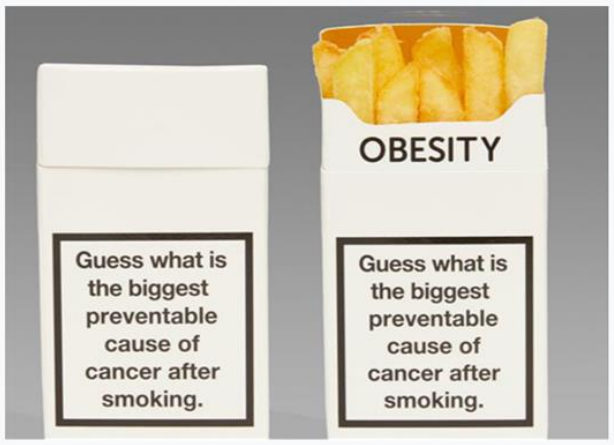
Image 2: Swap It Don't Stop It Campaign (Australia)

[https://www.healthpromotion.org.au/images/docs/WA-Branch/news/AHPANews_Dec11.pdf]

Image 3: Rethink Your Drink Campaign (USA)

[https://health.hawaii.gov/healthy-hawaii/files/2013/08/Posters-Rethink-Your-Drink.pdf]

Image 4: Obesity Campaign (UK)



[https://conscienhealth.org/2018/03/addressing-obesity-blunt-objective-or-evasive/]

4.2 Published Manuscript

Anti-obesity public health advertisements increase risk factors for the development of eating disorders

Claire Bristow ✉, Kelly-Ann Allen, Janette Simmonds, Tristan Snell, Louise McLean

Health Promotion International, daab107, https://doi.org/10.1093/heapro/daab107
Published: 19 July 2021

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Summary

Although overweight and obesity are increasing in prevalence, eating disorders such as anorexia nervosa, bulimia nervosa and binge-eating disorder are simultaneously on the rise. It is important to address the burden of disease of overweight and obesity on the population, yet there is concern that some of these efforts may be encouraging unhealthy weight control behaviours (UWCB). Using an online survey, 137 participants were exposed to four anti-obesity public health advertisements presented in random order. Weight satisfaction, shape satisfaction, desire to control weight, desire to control shape and desire to engage in UWCB were measured on a 100-point visual analogue scale. A significant effect of the experimental condition was found after exposure to Image 1 with a decrease in weight satisfaction, and increased desire to control body weight, body shape and engage in UWCB. Mean scores for UWCB also increased, on average, across all four image conditions. Public health advertisements targeting obesity risk encouraging unhealthy weight control and subsequent disordered eating behaviours. Those responsible for the implementation of such advertisements must consider very carefully the potential to cause unintended harm.

Keywords: eating disorders, disordered eating, public health, overweight, obesity

Topic: obesity, eating disorders, advertising, public health medicine, weight maintenance regimens, overweight

Issue Section: Article

The above screenshot is evidence of the published manuscript (abstract; Health Promotion International, 19 July 2021). Evidence of the remainder of the manuscript is provided in Appendix K. The following text presents the manuscript word for word with the exception of references to the present Thesis Appendices where necessary. Table numbers have also been amended to correspond to the Thesis chapter. The journal's preferred referencing style has been maintained.

4.2.1 Abstract

Although overweight and obesity are increasing in prevalence, eating disorders such as Anorexia Nervosa, Bulimia Nervosa and Binge Eating Disorder are simultaneously on the rise. It is important to address the burden of disease of overweight and obesity on the population, yet there is concern that some of these efforts may be encouraging unhealthy weight control behaviours. Using an online survey, 137 participants were exposed to four anti-obesity public health advertisements presented in random order. Weight satisfaction, shape satisfaction, desire to control weight, desire to control shape and desire to engage in unhealthy weight control behaviours were measured on a 100-point Visual Analogue Scale (VAS) scale. A significant effect of the experimental condition was found after exposure to Image 1 with a decrease in weight satisfaction, and increased desire to control body weight, body shape, and engage in unhealthy weight control behaviours. Mean scores for unhealthy weight control behaviours also increased, on average, across all four image conditions. Public health advertisements targeting obesity risk encouraging unhealthy weight control and subsequent disordered eating behaviours. Those responsible for the implementation of such advertisements must consider very carefully the potential to cause unintended harm.

Keywords: Eating Disorders, Disordered Eating, Public Health, Overweight, Obesity

4.2.2 Introduction

The increasing prevalence of overweight and obesity globally is well documented (World Health Organisation [WHO], 2018), and the burden of these conditions at both an individual and population level is well established (WHO, 2018). As such, there has been an intense focus on strategies that may reduce both overweight and obesity in recent years (Lean et al., 2018). At the same time, eating disorders (ED) are also on the rise, with conditions such as Anorexia Nervosa (AN), Binge-Eating Disorder (BED) and Bulimia Nervosa (BN) increasing at unprecedented rates (American Psychiatric Association [APA], 2013; National Eating Disorders Collaboration [NEDC], 2017; O'Connor et al., 2018; Watson et al., 2010).

Whilst previously regarded as separate health conditions, experts have suggested that both overweight/obesity and EDs may be more interconnected than initially thought, sharing many of the same risk factors including high body dissatisfaction and unhealthy weight control behaviours (Da Luz et al., 2017; Darby et al., 2007; Haines & Neumark-Sztainer, 2006; Irving & Neumark-Sztainer, 2002; Neumark-Sztainer et al., 2007). The National Eating Disorders Collaboration (NEDC) has also stated that the rate of individuals diagnosed with comorbid obesity and EDs has increased more than either condition alone (NEDC, 2017). With disordered eating behaviours having shown to contribute to the development of obesity and vice versa, new recommendations suggest future interventions may benefit from integrated treatment and prevention strategies that focus on both conditions (Da Luz et al., 2017; Darby et al., 2007; Puhl & Suh, 2015b). Without integrated treatment and prevention, there is concern that efforts to address one condition (i.e. obesity) may unintentionally promote engagement in the other (i.e. disordered eating) (Watson et al., 2010).

Of particular concern is the ongoing focus on weight as the main indicator of health, and that this intense focus may be further contributing to the ‘thin-ideal’ that exists in today’s society (J. K. Thompson & Stice, 2001). The thin-ideal is the notion of a slim body type

being more desirable than a larger body type, and is frequently portrayed by the media (traditional and social), film, television and pop-culture in general (Andrist, 2003; Bessenoff, 2006; Buser, 2011; J. K. Thompson & Stice, 2001). The resulting desire for the 'perfect' body type, constant striving for weight-loss and increased levels of thin-internalisation are believed to be contributing to rising rates of eating disorders and body satisfaction (Couch et al. 2016, Couch et al., 2018; Kilbourne, 1994; J. K. Thompson & Stice, 2001). With dieting considered the strongest risk factor for the development of EDs (Watson et al., 2010), it is clear that strategies that aim to reduce one's weight must be considered with caution.

Weight-loss interventions have previously been analysed for their potential to increase risk factors for disordered eating. Though the findings are mixed, it has been suggested that professionally-administered and supervised interventions do not appear to influence ED risk factors (Butryn & Wadden, 2005; Da Luz et al., 2015; Davison & Deane, 2010; Sim et al., 2013). However, the NEDC has argued that measurements of these risk factors are usually inadequate (NEDC, 2017). That is, such interventions do not sufficiently plan to measure ED risk factors thoroughly, nor with validated measures (NEDC, 2017). Additionally, persons who report eating issues and/or psychiatric problems are often excluded from these interventions, hence failing to represent vulnerable populations and reducing the risk of affect by nature of excluding such vulnerable groups (NEDC, 2017).

Other efforts to reduce overweight and obesity have also been analysed, such as the addition of nutrition labels and energy information (kJ/kcal) on restaurant menus. Larson and colleagues found that the use of kilojoule (kJ)/kilocalorie (kcal) labelling on menus is associated with binge eating and unhealthy weight control behaviours (UWCB) in both men and women (Larson et al., 2018). An online randomised study also found that menu labelling resulted in restricted ordering of calories by persons diagnosed with EDs (Haynos & Roberto, 2017). This issue still remains contentious however, with a large systematic review and meta-

analysis concluding that overall, menu labelling does not reduce calorie consumption amongst the general population (Sinclair et al., 2014). Similarly, body mass index (BMI) report cards in U.S. schools have attracted criticism over their potential to lead to extreme dieting and weight-based teasing (Evans & Sonneville, 2009). Whilst some have suggested that these potential harms outweigh the perceived benefits (Evans & Sonneville, 2009), the literature is currently inconclusive, with a large review finding insufficient evidence to support nor reject concerns of potential harm (H. R. Thompson & Madsen, 2017).

However, public health anti-obesity campaigns are less explored. Such campaigns have been vigorously administered by health and government agencies in an effort to curb the increasing prevalence of overweight and obesity (WHO, 2018; Saguy & Riley, 2005; Walls et al., 2011). These strategies generally contain messages on the health consequences of being overweight as well as strategies for weight reduction (Dixon et al., 2015; WHO, 2018). Concern has been expressed over the ways in which these efforts continue to portray an 'ideal-weight' and the thin-ideal, as well as the ways in which individuals are held solely responsible for their condition (Guttman & Salmon, 2004; MacLean et al., 2009). This is believed to further contribute to weight stigma and bias experienced by persons who are overweight or obese, as societal messages that emphasise one body shape over another may subject those in larger bodies to guilt, shame, discrimination, body hate and even harassment (Puhl & Suh, 2015a; Puhl & Heuer, 2009; Thomas et al., 2008). In Australia, this has recently been highlighted as a major topic of concern for the Western Australian Department of Health, who released a guide for media and communications professionals to reshape the way they address overweight and obesity in an effort to reduce some of these effects (Law & Puller, 2020). Additionally, there is also the risk of messages fuelling body obsession, body dissatisfaction and weight control behaviours, further raising concerns of their potential to

contribute to the development of EDs, and/or exacerbating symptoms in individuals who are already at risk or diagnosed (Hill, 2007; O'Dea, 2004; Puhl et al., 2012; Szwarc, 2003).

Given a notable lack of literature in the field, the authors recently conducted a systematic literature review to examine the effects of public health messages on risk factors for disordered eating (Bristow et al., 2020). This included negative body image, poor self-esteem, weight stigma, thin internalisation and/or unhealthy weight control behaviours (i.e. restricting food intake, bingeing and/or purging); all of which are proven to be significant risk factors for the development of EDs (NEDC, 2017; J. K. Thompson & Stice, 2001; Watson et al., 2010; Watson, 2011). The review identified that public health campaigns were often considered stigmatising whilst also exacerbating the thin-ideal and desire for thinness (Bristow et al., 2020). Further, it was clearly evident that research in this area notably lacks the use of validated outcome measures (Bristow et al., 2020). Additionally, risk factors were often measured as an aside to the main outcomes, and were not sufficiently focused on to draw strong conclusions, in-line with previous findings from the NEDC (NEDC, 2017).

Given these findings (Bristow et al., 2020), we aimed to directly investigate the effect of public health messages on risk factors for disordered eating using an online survey to address the following research questions:

Primary research questions:

1) Does exposure to anti-obesity public health campaigns increase risk factors for disordered eating, as measured by;
    a) weight satisfaction
    b) shape satisfaction
    c) desire to control body weight
    d) desire to control body shape

e) desire to engage in unhealthy weight control behaviours

2) If any, are these effects more pronounced in individuals with eating disorder symptomology and/or high levels of thin internalisation?

Secondary research question:

1) Is there any influence of gender, age, BMI, exposure time or device type on primary outcome measures?

4.2.3 Methods

Participants

Participants were recruited via online advertisements which displayed an image of a real-life health campaign, and prompted viewers to click the 'learn more' button, which directed them to the explanatory statement and survey page. Participants were made aware that by proceeding with the survey they were providing implied consent. Any person aged 15 years or over with proficiency in English was eligible to participate. The survey was open to persons of all nationalities. Participants could opt-in to the draw to win one of four $40 gift vouchers upon completion. Table 4–1 provides an overview of participants' baseline characteristics.

Table 4–1

Baseline Characteristics of 137 Male and Female Survey Respondents Aged ≥15 Years

	n	**%**
Female	89	65
Caucasian	71	51.8
Australian	71	51.8
	n	**mean (±SD)**
Age (years)	137	21.5 (±10.1)
Height (cm)	133	168.1 (±9.2)
Weight (kg)	136	68.5 (±16.2)

	n	%
BMI	132	24.3 (±5.5)
WS pre-exposure	137	51.43 (±30.71)
SS pre-exposure	137	53.36 (±31.11)
WC pre-exposure	137	70.76 (±30.16)
SC pre-exposure	137	67.58 (±30.09)
UWCB pre-exposure	137	29.64 (±35.28)

WS= weight satisfaction, SS= shape satisfaction, WC= desire to control weight (weight control), SC= desire to control shape (shape control), UWCB= desire to engage in unhealthy weight control behaviours. %= percentage.

Survey development

An online survey was compiled using the software Qualtrics, Version XM, Copyright 2019©. Studies of a similar nature and methodology were consulted alongside existing literature on the topic to develop the structure and content of the survey (Agliata & Tantleff-Dunn, 2004; Harper & Tiggemann, 2008; Knobloch-Westerwick & Crane, 2012).

The survey included four different public health campaign images, in random order (utilising Qualtrics© block randomisation features), from the last 10 years that focused on overweight/obesity reduction. These included advertisements from Australia, the United States and the UK, and were taken from campaigns such as '*Live Lighter*' and '*Swap It Don't Stop It*' (Morley et al., 2016; O'Hara et al., 2016). Advertisements ranged from confronting imagery (a male grabbing his stomach and an image of fat surrounding an internal organ with text eluding to "toxic fat"- Image 1), to less-confronting stimuli, such as an overweight male balloon character next to the '*Swap It Don't Stop It*' slogan (Image 2). Image 3 shows a female drinking from a bottle of soft drink with 'liquid fat' pouring out (text reads "don't drink yourself fat"), whilst Image 4 depicts a packet of cigarettes with French fries inside, comparing obesity to lung cancer. Images were purposefully chosen to allow for a comparison between different types of campaign imagery. A fixed minimum exposure time

of 15 seconds was implemented to ensure participants were adequately exposed to each image before they could move to the next section of the survey.

The survey was piloted on a group of 10 voluntary participants whom provided feedback on user experience, survey design and comprehension. Minor amendments (primarily stylisation) were made before the final version was distributed to participants.

Outcome measures

The primary outcome measures were: Satisfaction with body weight (WS); satisfaction with body shape (SS); desire to control weight (WC); desire to control shape (SC) and desire to engage in unhealthy weight control behaviours (such as laxative abuse, excessive exercise etc., UWCB). The five outcomes were chosen based on their identification as known risk factors for the development of eating disorders (Fairburn & Beglin, 1994), as well as their use in related, previous research (Champion & Furnham, 1999; Knobloch-Westerwick & Crane, 2012; Roehrig et al., 2008; Shaw & Kemeny, 1989; Simpson et al., 2017). Each outcome was measured on a 100-point Visual Analogue Scale (VAS). The five primary outcomes were measured pre-test (before exposure to any imagery), and then post-test after exposure to each individual image, in order to distinguish individual effects of each campaign (four times total). The VAS was chosen for its frequent prior use in measuring body dissatisfaction (Champion & Furnham, 1999; Groesz et al., 2002; Harper & Tiggemann, 2008; Knobloch-Westerwick & Crane, 2012), and its sensitivity to small changes in state measures (Agliata & Tantleff-Dunn, 2004). Baseline VAS responses were not shown to participants following exposure.

Upon completion of the body weight, shape and control measures, participants completed the Eating Disorder Examination Questionnaire (EDE-Q) (Fairburn & Beglin, 1994) and the Social and Cultural Attitudes Towards Appearance Questionnaire (version 4-

SATAQ-4) (Schaefer et al., 2015). The EDE-Q is a validated, 28-item questionnaire used to diagnose eating disorder psychopathology and is widely used in research studies (Luce & Crowther, 1999; Mond et al., 2004; Rose et al., 2013). The questionnaire provides frequency data on engagement in disordered eating behaviours (e.g., bingeing, purging etc.) as well as subscale scores; eating restraint, eating concern, shape concern and weight concern (Fairburn & Beglin, 1994). Participants indicate roughly how many days in a 28-day cycle they have engaged in thoughts or behaviours related to disordered eating using a 7-point Likert scale from 0 to 6, with '0' indicating no days, '1' indicating 1-5 days, '2' indicating 6-12 days and so forth (Fairburn & Beglin, 1994). Subscale scores are obtained by calculating the sum of each item in the scale, divided by the number of items. An overall global score can also be calculated using the sum of each subscale, divided by the number of subscales. Higher scores are indicative of stronger engagement in ED behaviours and can be used for diagnostic purposes (Rø et al., 2015). The questionnaire has demonstrated good internal consistency and test-retest reliability in previous research (Berg et al., 2012; Peterson et al., 2007; Rø et al., 2015).

The SATAQ-4 is a validated 22-item questionnaire that measures a person's level of internalisation of appearance ideals (Schaefer et al., 2015), and is often used in studies examining outside influences on an individual's level of internalisation (Agliata & Tantleff-Dunn, 2004; Roehrig et al., 2008). Five subscales exist within the questionnaire; internalisation (thin), internalisation (muscular), pressure (family), pressure (peers) and pressure (media). Participants rate their agreeance with statements such as "I want my body to look very thin" and "I feel pressure from the media to look in better shape" on a 5-point scale from "definitely disagree" to "definitely agree". Subscale scores are obtained by calculating the sum of each item in the scale, divided by the number of items. An overall global score can also be calculated by the sum of each subscale, divided by the number of

subscales. Previous research has demonstrated good internal consistency and reliability in studies with both female and male populations (Schaefer et al., 2015).

Finally, participants were asked to record any history of disordered eating, eating disorder diagnosis or suspected risk. Due to the sensitive nature of the survey content and questions, participants were provided with content warnings and support service information at various intervals. The Monash University Human Ethics Committee approved this study.

Statistical analysis

Data were directly transferred from Qualitrics© into IBM SPSS Statistics for analysis (Windows, version 26; IBM Corp., Armonk, N.Y., USA). Data are presented as mean ± SD unless otherwise stated. Parametric tests were used to analyse primary outcomes 1) and 2) and secondary outcome 1).

Preliminary analysis

Correlation analysis between each primary outcome measure (WS, SS, WC, SC, UWCB) found a strong correlation between WS and SS (r= .74) and WC and SC (r=.58). Previous research has suggested a strong correlation between *weight* and *shape* constructs warrants the collapsing of these two variables into a single measure (Berg et al., 2012; Byrne et al., 2015; Carrard et al., 2015). However, to determine differences between baseline and post-exposure scores, these were kept separate.

Mean EDE-Q scores were: Eating restraint = 3.18 (±1.59); eating concern = 2.78 (±1.53); shape concern = 4.18 (±1.81); weight concern 3.81 (±1.83) and global score 3.49 (±1.52). Previous research on the EDE-Q has recommended a clinical cut-off for ED diagnosis for global scores ≥4 (Giovazolias et al., 2013; Mond et al., 2006; Penelo et al., 2013). However, more recently, researchers have suggested that this cut-off is too stringent and an optimal cut-

off point is more likely in the 2.5 range (Rø et al., 2015). Considering this, the mean global score of the sample in this study is relatively high.

The SATAQ-4 scores in the present sample are similar to the norms from a sample of over 2000 men and women from various countries that formed the development and validation cohort of the SATAQ version 4 [Internalisation (thinness) = 3.21 (±1.04); Internalisation (athletic/muscular) = 3.03 (±1.10); pressure (family) = 2.70 (±1.23); pressure (peers) = 2.58 (±1.19); pressure (media) = 3.46 (±1.37) and global score = 3.01 (±.81)] (Schaefer et al., 2015). However, the Internalisation (athletic/muscular) mean score was higher in the present sample than that of the 'eating disturbed' subgroup in the same study (Schaefer et al., 2015). The remaining subscale scores were similar to that of the 'healthy' subgroup (Schaefer et al., 2015).

4.2.4 Results

A total of 137 participants completed the survey in full, with 308 non-completers. Two participants were excluded from data analysis as they reported an age <15 years. Some demographic data points were also excluded as they were extreme outliers (height <120cm, weight <36kg and >150kg). Independent samples t-tests found no difference in completers versus non-completers at baseline for age, height, weight, BMI or pre- WS, SS, WC, SC or UWCB, nor EDE-Q and SATAQ-4 scores. Twelve participants indicated they had been diagnosed with an eating disorder. Seventeen participants thought they were at risk of or suffered from an undiagnosed eating disorder.

Paired sample t-tests were performed to address primary outcome 1. A significant effect was found between baseline and post-exposure (Image 1) with a decrease in WS, and increase in desire for WC, SC and UWCB (Table 4–2). There was also a significant increase

in UWCB intentions from baseline to post-exposure for Image 4 (Table 4–2). There was no significant effect of exposure for all other image conditions.

Table 4–2

Primary Outcome Measure Scores (WS, SS, WC, SC and UWCB) at Pre-Versus Post-Exposure to Individual Image Conditions

		Mean (±SD)	p=
	Weight satisfaction (WS)		
Image 1	WS pre-exposure	51.43 (±30.71)	.003*
	WS post Image 1	47.28 (±35.61)	
Image 2	WS pre-exposure	51.43 (±30.71)	.123
	WS post Image 2	53.76 (±32.41)	
Image 3	WS pre-exposure	51.43 (±30.71)	.279
	WS post Image 3	53.19 (±33.28)	
Image 4	WS pre-exposure	51.43 (±30.71)	.407
	WS post Image 4	52.64 (±33.57)	
	Shape satisfaction (SS)		
Image 1	SS pre-exposure	53.36 (±31.11)	.066
	SS post Image 1	49.10 (±33.50)	
Image 2	SS pre-exposure	53.36 (±31.11)	.622
	SS post Image 2	54.36 (±30.98)	
Image 3	SS pre-exposure	53.36 (±31.11)	.710
	SS post Image 3	52.59 (±31.97)	
Image 4	SS pre-exposure	53.36 (±31.11)	.954
	SS post Image 4	53.26 (±32.14)	
	Desire weight control (WC)		
Image 1	WC pre-exposure	70.76 (±30.16)	.001*
	WC post Image 1	77.22 (±29.72)	
Image 2	WC pre-exposure	70.76 (±30.16)	.148
	WC post Image 2	68.12 (±31.93)	
Image 3	WC pre-exposure	70.76 (±30.16)	.916
	WC post Image 3	70.95 (±32.07)	
Image 4	WC pre-exposure	70.76 (±30.16)	.951
	WC post Image 4	70.64 (±32.92)	
	Desire shape control (SC)		
Image 1	SC pre-exposure	67.58 (±30.09)	.002*
	SC post Image 1	74.29 (±29.82)	
Image 2	SC pre-exposure	67.58 (±30.09)	.337
	SC post Image 2	65.44 (±32.58)	

		Mean (±SD)	p=
Image 3	SC pre-exposure	67.58 (±30.09)	.469
	SC post Image 3	69.13 (±32.06)	
Image 4	SC pre-exposure	67.58 (±30.09)	.425
	SC post Image 4	69.15 (±31.70)	
	Unhealthy weight control behaviour		
Image 1	UWCB pre-exposure	29.64 (±35.28)	.000*
	UWCB post Image 1	39.16 (±39.84)	
Image 2	UWCB pre-exposure	29.64 (±35.28)	.244
	UWCB post Image 2	31.82 (±36.35)	
Image 3	UWCB pre-exposure	29.64 (±35.28)	.130
	UWCB post Image 3	32.64 (±37.76)	
Image 4	UWCB pre-exposure	29.64 (±35.28)	.003*
	UWCB post Image 4	35.68 (±38.19)	

WS= weight satisfaction, SS= shape satisfaction, WC= desire to control weight (weight control), SC= desire to control shape (shape control), UWCB= desire to engage in unhealthy weight control behaviours.

*= significant after Bonferroni adjustment (p= ≤0.0125)

When comparing baseline scores to average post-exposure scores across all conditions, a significant effect was found for UWCB only (Table 4–3).

Table 4–3

Primary Outcome Measure Scores (WS, SS, WC, SC and UWCB) at Pre-Exposure Vs. Average Post-Exposure Scores Across all Image Conditions

	Mean (±SD)	p=
WS pre-exposure	51.43 (±30.71)	.782
WS average post	51.72 (±31.32)	
SS pre-exposure	53.36 (±31.11)	.544
SS average post	52.33 (±29.27)	
WC pre-exposure	70.76 (±30.16)	.541
WC average post	71.73 (±29.54)	
SC pre-exposure	67.58 (±30.09)	.281
SC average post	69.50 (±28.52)	
UWCB pre-exposure	29.64 (±35.28)	.001*
UWCB average post	34.82 (±35.86)	

WS= weight satisfaction, SS= shape satisfaction, WC= desire to control weight (weight control), SC= desire to control shape (shape control), UWCB= desire to engage in unhealthy weight control behaviours.

Average scores obtained by calculating the sum of scores of the four different image conditions, divided by the number of conditions (n 4). *= significant after Bonferroni adjustment (p= ≤0.0125)

Correlation analyses were used to explore primary research question 2. Table 4–4 demonstrates that many correlation scores increased from pre-to-post exposure. Strong correlations between EDE-Q subscales and main outcome measures were observed. In particular, the shape concern, weight concern and global score subscales were all strongly correlated with WS pre-and-post average scores, SS pre-and-post average scores, WC pre-only and UWCB pre-and-post average (r = .542 - .712). The eating restraint subscale was strongly correlated with UWCB pre-and-post average only, whilst the eating concern subscale was only correlated with WS and SS post average scores, as well as UWCB pre-and-post average.

Table 4–4

Correlation Between EDE-Q Scores and Primary Outcome Measures (WS, SS, WC, SC and UWCB) Pre-Exposure and Post-Averages

		WS pre-exposure	WS post-average	SS pre-exposure	SS post-average	WC pre-exposure	WC post-average	SC pre-exposure	SC post-average	UWCB pre-exposure	UWCB post-average
Eating	*r*=	-.363	-.382	-.319	-.388	.465	.421	.385	.447	.571	.611
Restraint	p=	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Eating	*r*	-.467	-.525	-.464	-.539	.460	.391	.343	.382	.638	.685
Concern	p=	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Shape	*r*	-.626	-.649	-.638	-.650	.548	.468	.407	.447	.578	.624
Concern	p=	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Weight	*r*	-.696	-.685	-.599	-.620	.542	.458	.306	.378	.576	.635
Concern	p=	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Global	*r*	-.611	-.634	-.573	-.620	.566	.488	.402	.462	.659	.712
Score	p=	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

WS= weight satisfaction, SS= shape satisfaction, WC= desire to control weight (weight control), SC= desire to control shape (shape control), UWCB= desire to engage in unhealthy weight control behaviours.

Average scores obtained by calculating the sum of scores of the four different image conditions, divided by the number of conditions (n 4). p= 2-tailed.

In a similar way to the EDE-Q, Table 4–5 demonstrates that the strength of correlation between primary outcome measures and the SATAQ-4 often increased from pre-to-post exposure. A strong correlation was also found between the SATAQ-4 Internalisation (thin), pressure (family) and global score subscales for UWCB pre-and average only (r = .503 - .609, Table 4–5).

Table 4–5

Correlation Between SATAQ-4 Scores and Primary Outcome Measures (WS, SS, WC, SC and UWCB) Pre-Exposure and Post-Averages

		WS pre-exposure	WS post-average	SS pre-exposure	SS post-average	WC pre-exposure	WC post-average	SC pre-exposure	SC post-average	UWCB pre-exposure	UWCB post-average
Internalisation (Thin)	*r*=	-.439	-.454	-.441	-.457	.313	.280	.289	.297	.535	.517
	p=	.000	.000	.000	.000	.000	.001	.001	.000	.000	.000
Internalisation (Athletic/muscular)	*r*	.031	-.021	-.002	.006	.203	.160	.252	.241	.228	.114
	p=	.720	.808	.983	.940	.017	.062	.003	.005	.007	.185
Pressure (Family)	*r*	-.364	-.434	-.330	-.438	.373	.253	.198	.254	.549	.503
	p=	.000	.000	.000	.000	.000	.003	.020	.003	.000	.000
Pressure (Peer)	*r*	-.332	-.338	-.244	-.268	.330	.280	.136	.235	.408	.452
	p=	.000	.000	.004	.002	.000	.001	.112	.006	.000	.000
Pressure (Media)	*r*	-.324	-.379	-.317	-.454	.257	.283	.264	.309	.393	.401
	p=	.000	.000	.000	.000	.002	.001	.002	.000	.000	.000
Global Score	*r*	-.408	-.466	-.383	-.464	.425	.363	.335	.389	.609	.507
	P=	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

WS= weight satisfaction, SS= shape satisfaction, WC= desire to control weight (weight control), SC= desire to control shape (shape control), UWCB= desire to engage in unhealthy weight control behaviours.
Average scores obtained by calculating the sum of scores of the four different image conditions, divided by the number of conditions (n 4). p= 2-tailed.

Regarding the secondary research question, Independent t-tests found that males had higher levels of weight satisfaction (WS) at baseline than females (60.26 ± 30.85 vs. 49.04 ± 29.52, p=.05, equal variances not assumed), and after exposure to Image 1 (59.74 ± 37.10 vs. 43.33 ± 33.54, p=.016, equal variances not assumed). Females had higher weight concerns than males (3.98 ± 1.76 vs. 3.23 ± 1.84, p=.03, equal variances not assumed) on the EDE-Q,

whilst males had a higher level of Internalisation (athletic); 3.43 ± 1.09 vs. 2.86 ± 1.10, p= .006, equal variances not assumed) on the SATAQ-4. There was no correlation between age, weight, height or BMI on primary outcome measures. Exposure time (s) had no effect on outcome measures. Device type did not affect outcome measures.

4.2.5 Discussion

The present research examined participants' reactions to real-life anti-obesity public health campaigns from the perspective of body satisfaction and desire to change their bodies. By measuring these outcomes both pre-and-post exposure, we were able to determine significant changes in participants' feelings of body satisfaction and desire to engage in weight control behaviours from baseline to post-image-exposure.

First turning to participants, that 12 out of 137 reported being diagnosed with an eating disorder, and a further 17 believing they were at risk/undiagnosed, is roughly in line with estimated national and global population prevalence (~ 14-19%) (Hay et al., 2015; Micali et al., 2017; Ward et al., 2019). However, due to low numbers of epidemiological studies and the secretive nature of EDs, exact prevalence is difficult to determine. Additionally, in considering gender analysis (secondary research question 1), that females had higher levels of weight concern and lower levels of weight satisfaction is consistent with the literature and well-established evidence base that females typically suffer from poorer body image are at higher risk of developing an ED than males (Mellor et al., 2010; Peckmezian et al., 2017; Watson et al., 2010).

In considering primary research question 1, there was a significant effect of the experimental condition (image exposure) on participants' satisfaction with weight, desire to change weight and shape, and desire to engage in behaviours deemed unhealthy for weight control (e.g., purging, laxative use etc.). Interestingly however, this effect was found for the

most part after exposure to Image 1 only. Image 1 was one of the most graphic and confronting of all the experimental stimuli and depicted a male pressing together his stomach with text reading “grabbable gut outside”, followed by an image of the insides of internal organs with visible fatty deposits which read “means toxic fat inside” (Morley et al., 2016). The significant impact of this image might be explained by research that suggests weight centric messages that depict larger body types are highly stigmatising (Couch et al., 2018; Robinson & Coveleski, 2018), leading to intense feelings of body dissatisfaction and desire to change body weight (Carels et al., 2010; Mensinger et al., 2016). Interestingly, whilst Image 1 had a significant effect on WS, WC and SC, SS was not affected. Though some studies have found strong correlations between the constructs of *weight* and *shape* (Berg et al., 2012; Byrne et al., 2015; Carrard et al., 2015), our results suggest that participant perceptions of these concepts are not always equal, thereby justifying their existence as separate variables when measuring an individual’s level of body satisfaction. In addition, when average scores across all four experimental conditions were analysed, desire to engage in UWCB was significantly greater post-exposure. This suggests that overall, exposure to anti-obesity health campaigns may encourage unhealthy weight loss behaviours.

Addressing primary research question 2, correlation analysis demonstrated that global EDE-Q scores were most strongly correlated with UWCB both pre-and-post exposure, with desire to engage in UWCB increasing at the same time as overall EDE-Q symptomology. Additionally, the SATAQ-4 global score was also most strongly correlated with desire to engage in UWCB. Hence, for this sample, the more a person internalises the thin ideal, the stronger their desire to engage in weight control behaviours. Further, looking to pre-post measures, the majority of correlations increased following exposure to images. These findings further support previous concerns that weight-loss messages risk increasing body dissatisfaction and weight control behaviours, and further exacerbate symptoms in

individuals who are at a higher risk (Hill, 2007; O'Dea, 2004; Puhl et al., 2012; Szwarc, 2003). However, our results also suggest that image/ad type may be important, with highly stigmatising text and imagery likely to encourage more unhealthy behaviours.

That the present findings suggest anti-obesity campaigns contribute to unhealthy weight control behaviours, and notably in higher-risk population groups, is cause for concern when considering that these advertisements are usually presented to the masses on a population-based scale and do not discriminate between audiences. As such, vulnerable sub-groups of the population (e.g., persons with EDs) may be at risk of further exacerbation of their condition, particularly after repeated exposures that occur in real-world settings. Indeed, it is not possible to know exactly how long exposure occurs for in a real-world environment, nor how long effects of exposure last for. However, it is important to consider that these advertisements do not exist on their own, and messages reinforcing the thin-ideal and stigmatisation of larger bodies exist through many mediums across multiple platforms (i.e. traditional media, social media, social commentary) (Himes & Thompson, 2007; Mingoia et al., 2017; Sypeck et al., 2004; Willis & Knobloch-Westerwick, 2014). What's more, is findings show that exposure to these mediums (both traditional and social media) not only reinforce the thin-ideal but actually directly impact eating behaviours including restricting food intake (Anschutz et al., 2009; Holland & Tiggemann, 2016). Hence, though the present study did not measure actual behaviour (only intentions in UWCB), we may infer that given an individual is likely to be exposed to multiple forms of messages through varying mediums and across multiple platforms at any given time, this combined impact is likely to amplify effects beyond single-exposure alone.

This research is not without its limitations. Firstly, whilst participants were exposed to each image for a minimum of 15 seconds, exposure time beyond this minimum was not controlled for and some participants may have viewed images for longer, potentially

exacerbating effects. Similarly, the exposure time chosen for this study may be greater than in a real-world setting, hence the potential for heightened responses. Additionally, given outcome measures were repeated four times, participants may have become fatigued and the lingering effect of previous campaigns could have carried over to subsequent images. This makes it difficult to fully distinguish the effects of a singular campaign. Finally, the purpose of the research was made very clear to participants, and multiple trigger warnings were provided throughout the survey. Consequently, participants may have felt more sensitive to the stimuli given they were already primed with the topic and nature of the study.

This research in a sample of 137 male and female teenagers and adults supports existing concerns that anti-obesity efforts may have unintended negative consequences on audiences (Couch et al., 2018; Guttman & Salmon, 2004; Watson, 2011; MacLean et al., 2009; O'Dea, 2004; Puhl & Heuer, 2010), but also seems to suggest that the nature of the message and/or image type plays an important role. Given studies of this nature have been limited so far, we recommend future research using validated measures to continue exploring messaging and image types in order to further understand how such advertisements could be improved and that impact on vulnerable population groups is minimised. In the meantime, the authors support the work of the NEDC and Western Australian Department of Health in encouraging a shift in narrative from heavily weight centric messaging and shaming tactics to a more neutral, balanced approach that focuses on health as a holistic endeavour opposed to the achievement of a certain body size (Watson, 2011; Law & Puller, 2020).

4.2.6 References

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4.3 Summation

This quantitative research study directly measured risk factors for the development of EDs following exposure to real–world campaigns using clearly defined outcome measures, validated questionnaires and reliable methods previously implemented in the literature. Additionally, it was able to successfully detect changes in outcome measures between baseline and post-exposure; a novel finding in this field of inquiry. Further, it provided evidence to support concerns that campaigns may be particularly affecting vulnerable audiences, demonstrating an increased sensitivity in persons with high ED symptomology and thin internalisation.

Building on the findings of Study 1 (SLR), this study further supports concerns that anti-obesity public health campaigns influence and increase risk factors for EDs. Concerningly, an increased desire to engage in unhealthy behaviours for weight control was evident after exposure to 2/4 campaigns. Granted, actual behaviour change was not measured given the ethical challenges of doing so, however it is not unfathomable that consistent exposure, such as that occurs on a daily basis, would be enough to influence actual behaviour. A further limitation includes the lack of control group, such as neutral campaign exposure, which would provide further scientific rigour. Future research would benefit from this inclusion. Finally, the sample size characteristics (e.g., mean age and BMI) should be taken into account when generalising results to the wider population.

Overall, the findings from this study provide evidence in support of the harms of some anti-obesity campaigns on self-reported ED risk factors. However, whilst this information is valuable, it does not explore the *why*, and *how*, audiences are affected. Such depth of exploration may be attainable through further qualitative enquiry. As such, the third and final study in this Thesis (Study 3) endeavours to further understand the responses obtained in Study 2. Before this study is presented, Chapter 5 will introduce qualitative

research design, providing a rationale for the use of this methodology in the final study (Chapter 6).

Chapter 5: Qualitative Methodology–Interpretative Phenomenological Analysis (IPA)

5.1 An Introduction to Qualitative Methodology

Qualitative methodology and its constructivist/interpretivist underpinnings (as well as applicability to public health, limitations, and so forth) have been discussed earlier in this Thesis (Chapter 2.1). However, in order to provide important context for the final study to be presented, it is necessary to explore qualitative research practices in more depth, before detailing the specific qualitative approach used in the last research study of this Thesis.

The development of qualitative research has not been linear, though it is believed to have begun in the early 1900s, somewhere between 1900–1950 (Mills & Birks, 2014). It is noted however that qualitative research in its purist form—psychological enquiry—existed in the decades before it came to be defined by specific terminology (Brinkmann, 2015). Qualitative research continued to gain momentum throughout the remainder of the 1900s (Isaacs, 2014), with its popularity increasing through to the present day (Gough & Lyons, 2016). Broadly, qualitative research is a way of understanding social realities, used frequently in psychology and behavioural sciences to explore phenomena and the human experience (Leavy, 2014). That is, qualitative research seeks to explore the ways in which people experience and assign meaning to situations, events, and circumstances. It is also involved with the philosophical foundations of *paradigm, ontology* and *epistemology* (Leavy, 2014). Paradigm being the worldview in which one filters knowledge, ontology being one's philosophical belief system and *what can be known*, and epistemology involving *who can be the knower* of knowledge (Leavy, 2014). So, qualitative research seeks to address a paradigm (world view), by uncovering one's experience (ontology), through the use of a researcher(s) (epistemologist). As such, a qualitative researcher recognises themselves as the research *tool*, acknowledging their role in the interpretation of participant experience and the subjectivity of this interpretation (Leavy, 2014).

There are various designs and methodologies that exist under the umbrella term of *qualitative research*, with the most common including: grounded theory, phenomenology, participatory action research, narrative, ethnography, and case study (Creswell et al., 2007; Percy et al., 2015; Starman, 2013). Briefly, grounded theory research aims to form an explanation (theory) of a certain action, process or interaction based on views elicited from participants (Creswell et al., 2007; Percy et al., 2015). Phenomenology explores lived experience and seeks to uncover the ways in which people experience phenomena, including their attitudes, beliefs, opinions and feeling, particularly phenomena that participants have in common (Creswell et al., 2007; Percy et al., 2015). Participatory action research usually centres around an issue of social justice, whereby the researcher and participants work together to create a solution (Creswell et al., 2007). Narrative studies generally involve spoken or written text in which events and/or experiences are detailed in chronological order, usually involving only a couple of participants (Creswell et al., 2007). Ethnography relates to the study of particular groups and their customs/culture (Percy et al., 2015), whereas a case study refers to the detailed analysis of either a particular person, or a group of people who have experienced a particular *case* (Creswell et al., 2007; Starman, 2013). In addition to these designs, there are numerous data collection methods utilised in qualitative methodology, dependent on the type of design chosen. These include interviews (either structured or semi-structured), focus groups (with a group of interest), content analysis (of written or verbal content), or observations.

There are various approaches to qualitative research, with the most suitable determined by exactly what the researcher aims to uncover. It is then that the research question is of high importance, to ensure that a suitable design is chosen. After consideration of the preceding studies, it became clear that an understanding of how those most at risk (those diagnosed with EDs) are affected by anti-obesity campaigns and their associated

messages (PHMs) was important to explore. Hence, the research question became *How do individuals diagnosed with EDs respond to and experience public health anti-obesity campaigns?* Given phenomenology aims to describe the ways in which people experience certain phenomena (PHMs), particularly when there is an aspect of commonality (EDs; Creswell et al., 2007; Percy et al., 2015), a phenomenological approach was chosen. In particular a specific phenomenological approach known as Interpretative Phenomenological Analysis (IPA), described in more detail in Section 5.2, was selected.

5.2 The IPA Approach

Interpretative Phenomenological Analysis (IPA) was introduced by Jonathan Smith during the 1990's as an alternative qualitative approach to health psychology (Smith, 1996). The aim of IPA is to explore how individuals process and make sense of their own worldview, including perceptions, experiences, and understanding of the world (Smith, 1996). It was originally proposed for the field of health psychology upon recognition that there is more to health than the traditional biomedical approach, with merit in looking beyond cause and effect in order to truly understand an individual's experiences and perceptions of their health status (or condition/illness etc.), as well as the meanings they assign to these (Brocki & Wearden, 2006; Smith, 1996). Specifically, IPA concerns itself with participants' subjective accounts that are uniquely their own. It is with this notion that IPA is underpinned by the philosophical principle of *phenomenology*; detailed examination of human experience (Shinebourne, 2011). IPA is also strongly aligned with the philosophical principle of *hermeneutics*; theory of interpretation (Eatough & Smith, 2017; Shinebourne, 2011). In fact, IPA is said to operate on a *double hermeneutic*, whereby the researcher attempts to make sense of participants' sense making (Smith, 2017). Hence, it is the researchers' role to attempt to access the subjective world of the participant, and interpret their interpretations; this addition of the researcher's own understanding considered a strength of the design.

However, IPA is somewhat limited by an individual's ability to articulate their thoughts, views, and perspectives (Baillie et al., 2000; Brocki & Wearden, 2006). It also acknowledges that the researchers' interpretation of participants' articulations is influenced by their own subjective worldview and experience (Smith et al., 1999). The final principle of IPA is *idiography*; detailed examination of individual experience (Shinebourne, 2011). IPA is idiographic in its approach in that it focuses strongly on the individual. Though a body of work using IPA will give an overview of the sample as whole, each individual's voice is maintained throughout (Spiers & Smith, 2019).

There are numerous guides that outline the main steps to be taken in undergoing IPA research (Larkin & Thompson, 2012; Pietkiewicz & Smith, 2014; Shinebourne, 2011). In consulting these resources, an overarching guide was created to inform the process for Study 3. These steps, as well as their justifications and relevant theories, will be discussed.

- **Forming a research question:** In forming the research question, it is important for the researcher to take an inductive approach, with a question that is both open–ended and exploratory, and gives the best opportunity to get at the lived experience of the participant (Pietkiewicz & Smith, 2014; Shinebourne, 2011). This process should be carefully considered, as the research question has the potential to either limit, or expand, what can be discovered (Pietkiewicz & Smith, 2014).
- **Sampling:** Identifying the appropriate sample for IPA is one of the most important considerations for the researcher. IPA sampling should be purposive; with participants selected with an intended purpose (opposed to randomly; Pietkiewicz & Smith, 2014; Shinebourne, 2011). Selection is generally based on a particular experience or condition (or similar notion) that participants have in common, meaning the sample is relatively homogenous (Pietkiewicz & Smith, 2014). The shared experience should also be one that holds some sort of meaning for participants (Eatough & Smith, 2017).

Additionally, unlike many quantitative study designs, recommendations for IPA include using a relatively small sample size. Generally, a sample size greater than ~15 would be considered too large to conduct IPA effectively (Wagstaff et al., 2014). This is due to the intensive analysis process involved with IPA, and ensures that its idiographic approach is still maintained; too large a sample size can result in individual voices being lost (Eatough & Smith, 2017). IPA emphasises quality of data over quantity (Larkin & Thompson, 2012).

- **Data collection:** The most common, and most recommended, form of data collection in IPA is one–on–one semi-structured interviews (Eatough & Smith, 2017; Larkin & Thompson, 2012; Pietkiewicz & Smith, 2014). Using a semi-structured approach, opposed to fully-structured, enables flexibility from both parties, with the researcher able to respond to participant replies, and prompt further if/when necessary (Pietkiewicz & Smith, 2014). During interviews, it is the role of the researcher to attempt to understand the participant's world to explore their experience (Larkin & Thompson, 2012). It is also important for researchers to be aware of any sensitivities present in the participant, and to respond to these appropriately (Pietkiewicz & Smith, 2014). A strategy to address this is developing an interview schedule in which any potentially sensitive questions are posed in the middle of the interview, with softer, rapport building questions at the beginning and end to ease participants in–and–out of the interview (Spiers & Smith, 2019).
- **Data analysis:** The data analysis stage is the most laborious component of IPA. This process involves the researcher becoming as immersed in the data as possible, and can further be broken down into multiple phases:

- *Transcript readings:* In order to become fully immersed in the data, the researcher will usually read over interview transcripts multiple times (Pietkiewicz & Smith, 2014)
- *Open/free coding:* After becoming familiar with the transcripts, the researcher will then engage in the free coding process, whereby they openly write down thoughts and perceptions of the data, including not just the words themselves, but any intonations, pauses etc. (Larkin & Thompson, 2012; Pietkiewicz & Smith, 2014). This allows them to *get everything out*, including any of their own biases, before moving to a more structured approach (Larkin & Thompson, 2012).
- *Phenomenological coding:* This is where a more formal type of coding will occur, at the in-depth, line–by–line level, where the researcher may begin to see some links occurring throughout the transcript (this step is still at the individual transcript level; Larkin & Thompson, 2012). It is at this stage where the researcher may identify what has been termed "The Gem"; a single comment or remark that jumps out and conveys the participant's thought very clearly (Smith, 2011b). A gem is likely to feature in the final write-up of the study, and can almost stand alone in that it so distinctly portrays a particular concept.
- *Identification of emerging themes:* Once the transcript has been analysed in detail using the preceding steps, themes that have emerged from the data can begin to be labelled and grouped in a meaningful way (Larkin & Thompson, 2012).

- *Developing dialogue:* From this point, the researcher will begin to ask questions of, or interrogate the data, critically analysing interpretations and refining these (Larkin & Thompson, 2012).
- *Developing structure and organisation:* Once interpretations and themes have been decided upon, the researcher can begin to structure these themes, and organise the data according to these structures. It is important that the data be organised so that each comment can be linked back to the original transcript (Larkin & Thompson, 2012). It is at this stage that the researcher looks beyond individual transcripts to the broader context, involving all participants. It is also at this stage, when each transcript has been analysed individually, that overall convergences and divergences in participants' accounts are explored (Spiers & Smith, 2019)

- **Data presentation:** Once the analysis phase has been completed, the researcher can begin to write up the findings. In IPA, this involves creating a narrative representation of the data, generally presented theme by theme, and supported by evidence (direct participant quotes; Larkin & Thompson, 2012; Pietkiewicz & Smith, 2014). It is important here that the researcher maintain IPA's idiographic philosophy, by ensuring that the individual is still represented in the overall narrative (Smith, 2017).
- **Reflexivity:** Although presented as the last step here, reflexivity is a process that should be undertaken the entire way through an IPA research project. This involves the researcher reflecting on their own biases, inputs and perceptions, and how this may influence their interpretation (Larkin & Thompson, 2012). This is an ongoing process, as sometimes one may not be aware of their own biases until they are in the midst of analysis, or even data presentation (Eatough & Smith, 2017). Reflexivity is an important process in IPA as it acknowledges the notion that our observations,

> perceptions, beliefs and opinions originate from ‘somewhere’, and that our own individual existence and experiences ultimately shape our worldview (Larkin & Thompson, 2012). By constantly engaging in reflexivity and recognising their own assumptions, the researcher is able to make a concerted effort to put these aside and remain grounded in the participants’ own views, opposed to their own (Larkin & Thompson, 2012).

Further to guidelines for methodology, some experts in the field of IPA have outlined numerous standards that make for a high-quality study (Larkin & Thompson, 2012; Smith, 2011a). These include: maintaining the integrity of IPA’s idiographic approach whilst also providing insight into shared participant experiences; an analysis that focuses on the ways in which participants assign meaning to their experiences, opposed to a recount of events; triangulation—utilising multiple sources to support an argument (in this case engaging a peer or supervisor to doublecheck the analysis and proposed narrative)—is used to achieve trustworthiness; extracts (quotes) used where necessary to ensure transparency of data; context is provided where appropriate to assist in understanding/comprehension of participant accounts, and IPA theory (phenomenology, hermeneutics, idiography) has been engaged with (Larkin & Thompson, 2012; Smith, 2011a). Not only do these standards assist in identifying high-quality IPA studies, but also act as measures of quality assurance for researchers when using the IPA approach.

Finally, it is important to acknowledge that IPA is not without its limitations, particularly in terms of practicality for the researcher. Wagstaff and colleagues (Wagstaff et al., 2014) detail the experiences of eight researchers who have used IPA, and the barriers and difficulties they faced in doing so. These included difficulties in obtaining support for methodological issues (given IPA is a relatively new qualitative method), ethical issues due to IPA often exploring sensitive topics, seemingly overwhelming amounts of data and

challenges in moving from the individual perspective to the overall sample narrative, and difficulty in attempting to make such comprehensive and meaningful data fit within a ‘neat box’ (theme; Wagstaff et al., 2014). Despite these challenges, IPA is a highly valuable qualitative design that enables a rich, detailed insight into the meaning participants assign to a shared experience. It is for this reason, as well as IPA’s strong philosophical underpinnings, that it was selected for use in the final research study to be presented in this Thesis (Study 3). This study, including rationale and specific methodology, is detailed in the proceeding chapter (Chapter 6).

Chapter 6: A Qualitative Analysis

6.1 Overview

Study 3, the final study to be presented, was informed by the findings from Study 2. In Study 2, after asking the question *Does exposure to anti-obesity public health campaigns increase risk factors for the development of eating disorders?* it was found that pre-versus-post exposure outcome measures demonstrated a statistically significant increase in risk factors for disordered eating. Additionally, these effects seemed to be heightened in individuals who reported higher levels of eating disorder (ED) symptomology. Hence, Study 3 aimed to explore these findings further.

The benefits of a mixed-methodological approach for answering a research question(s) have previously been discussed (Chapter 2), and are further drawn upon for this final qualitative study. While Study 2 was able to demonstrate a significant, quantifiable influence, this next study aimed to provide insight into the *how* and *why*. That is, by exploring the experiences and perceptions of those identified as most susceptible in Study 2, meaning can be assigned to the quantitative data obtained. As identified in Chapter 5.2, the formulation of the research question in qualitative research needs to be carefully considered in order to determine the scope of what can be explored through interviews. Therefore, in considering this, and with respect to the phenomenological underpinnings of Interpretative Phenomenological Analysis (IPA), this study asks the question *How do individuals diagnosed with EDs respond to and experience public health anti-obesity campaigns?* A detailed description into how this was performed using IPA, as well as the findings from this exploration, will now be presented.

6.2 Methods

IPA was the primary qualitative methodology used in this study. This approach aims to understand the ways in which individuals make meaning of and experience phenomena, and has been frequently used in the fields of health and psychology (Brocki & Wearden, 2006; Spiers & Smith, 2019). The three main underpinnings of IPA are *phenomenology*; examination of human experience, *hermeneutics*; theory and methodology of interpretation, and *idiography*; emphasis on individual experience (Smith, 2011a; Spiers & Smith, 2019). IPA can be very useful for exploring how *x* experiences *y*. In particular, how persons with similar, often less-common experiences (such as EDs) relate to phenomena (Shinebourne, 2011; Spiers & Smith, 2019). As such, this methodology was deemed the most appropriate for exploring how individuals diagnosed with eating disorders personally experience public health anti-obesity campaigns. A more detailed explanation of the IPA is provided in Section 5.2.

This study was approved by the Monash University Human Research Ethics Committee.

Participants

Inclusion Criteria

One of the core components of IPA methodology is the implementation of purposive sampling (Spiers & Smith, 2019). That is, the researcher deliberately selects participants who can shed light on the research question based on a particular characteristic of interest. This enables a thorough exploration of the commonality between participants' perspectives, and to establish similarities and differences between them. Due to the intricate nature of the IPA approach, small sample sizes are recommended (5–16 participants; Smith, 2011a; Spiers & Smith, 2019). As such, a target sample size of 12 was selected.

This study purposively recruited Australians 15 years and over with a current or previous diagnosis of an ED. Current or previous diagnosis was chosen for inclusion as recovery from EDs has shown to be non-linear with long-lasting effects (Bowlby et al., 2015; Keel et al., 1999; O'Brien & Vincent, 2003; Steinhausen, 2009; Wetzler et al., 2020). Therefore, it was considered that persons with a history of EDs would continue to possess valuable insights. Participants currently being treated as in-patients were deemed high risk and subsequently excluded due to the sensitive nature of interview content. Additionally, 15 years was selected as the minimum age due to concerns younger audiences might be too impressionable regarding the image material. Interviews were limited to Australia, as originally it was intended that these be conducted face–to–face. However, due to the global COVID-19 pandemic and physical distancing restrictions, all interviews were conducted over the teleconference technology platform Zoom©.

Recruitment

Recruitment was through advertisements on the internet, social media platforms, and by word of mouth through author networks. Advertising materials positioned the study as interviews exploring the ways in which public health anti-obesity campaigns affect persons with EDs (Appendix J). Participants received a gift voucher as a token of appreciation for their time.

Participant characteristics

Twelve (n=12) participants completed interviews between May and August 2020. All were female, aged between 19 and 42 (27.3 ± 7.0). Self-reported diagnosis varied between anorexia nervosa (AN, n=7), bulimia nervosa (BN, n=3), otherwise specified feeding and eating disorder (OSFED, n=1) and both AN and BN (n=1). Participants were a mix of previously diagnosed and recovered (n=3), currently diagnosed (n=6) or in between (n=3).

Materials

Participants were exposed to four different public health campaign images (one at a time) during each interview. These images were chosen based on their use in, and subsequent findings of, Study 2. Though the overarching aim of each campaign was overweight/obesity prevention, each advertisement utilised a different approach, including variances in visual imagery, text, and underlying message. This diversity in advertisement type allowed for the comparison of contrasting of images and messaging, as well as broader analysis of campaigns as a whole. An overview of the campaigns selected is presented in Table 6–1. The images were previously presented in Section 4.1.2.

Table 6–1

Description of Campaign Images

Image[1]	**Country**	**Visual description**	**Text**
1	U.K.	2 packets of cigarettes, one open and one closed - open packet is filled with French fries	*"Guess what is the biggest preventable cause of cancer after smoking"*
2	U.S.	A female drinking from a bottle of soft drink with liquid fat pouring out of the bottle onto her mouth and body	*"Don't drink yourself fat choose water instead"* *"Rethink your drink"*
3	Australia	An overweight male balloon character Measuring tape used as an exclamation mark	*"Swap it don't stop it"*
4	Australia	A male clasping his stomach in his hands positioned above an image of visceral fat surrounding an internal organ Heart Foundation Logo Cancer Council Logo	*"Grabbable gut outside means toxic fat inside"* *"Reduce your risk of heart disease, type 2 diabetes and cancer by eating less and moving more every day"*

[1]Images were presented in a different order between studies 2 & 3, and therefore the corresponding number for each image has varied.

Interview development

The process of developing the interview structure was guided by the hermeneutics of IPA and an endeavour to *make sense of other's sense making* (Smith & Osborne, 2015; Smith, 2017). That is, it was important to consider the most effective way of exploring participants' own perceptions and interpretation of the content that was presented to them. It was also vital that interview questions did not lead participants to certain conclusions, but rather gently prompted personal thought and exploration relative to the campaigns being studied. As such, a semi-structured, flexible interview schedule was developed, enabling participants the opportunity to explore and elaborate on concepts at their own will (Spiers & Smith, 2019). Questions used to guide the interviews were drafted and refined by the researcher and a supervisor (JS). Follow up prompts were included to aid further discussion if needed. The interview was separated into two parts. In Part A, questions were asked in relation to each individual campaign image, and in Part B, questions related to the campaigns overall. The full interview schedule is presented in Table 6–2.

Table 6–2

Semi-Structured Interview Schedule

Schedule part A	*Potential prompts*
Have you seen this campaign/similar campaigns? Do you notice these in your day-to-day life? What is your initial response to this campaign in particular?[1] What do you like/dislike about this campaign?[2] What is your understanding of this campaign and what it aims to achieve?[3] In relation to your health condition, how do you think it affects your understanding and/or interpretation? How do you think others would respond to these campaigns? How do you think your understandings and/or perceptions of the campaign may differ from others?	[1]*For example, what type of feelings, emotions, and thoughts does this bring up for you?* [2]*For example, you may choose to explain how it makes you feel, or how you think it may make others feel* [3]*For example, how do you receive, understand and interpret the messages conveyed? Adjectives may be helpful here* [4]*According to how you have previously described its impact?*

Do you have any suggestions of how this campaign may be improved?[4]	
Schedule part B What are your overall thoughts and feelings about these images and campaigns as a whole? How do you perceive these, in relation to your condition?[5] Can you explain whether or not you believe there are differences between these, or they are mostly the same? Do you have any other thoughts, insights or comments you would like to add?	[5]*For example, how do they make you feel, from the perspective of your diagnosis with an eating disorder?*

[1, 2, 3, 4, 5] Superscript number corresponds to potential prompt

In line with IPA recommendations, initial questions were of a general nature to ease participants into the conversation, with more sensitive prompts specific to their condition arising in the middle of the interview once rapport had been established (Spiers & Smith, 2019).

Analysis

Interview recordings were transcribed verbatim (Appendix L). IPA stipulates that all transcriptions need to be completed before the analysis process can begin (Smith, 2011a). Once all interviews were transcribed, they were read and re-read multiple times to ensure data immersion. As encouraged by the IPA approach, interviews were analysed individually at first, followed by overall thematic analysis to identify recurring themes, convergences and divergences (Smith, 2017; Spiers & Smith, 2019). This sequence ensures that each individual's experience remains present and is not lost to the overall analysis (Smith, 2017). More specifically, each interview was analysed by arranging the transcriptions into tables, with a column for coding themes on the right of text, and a column for exploratory commentary on the left (IPA methodology; Spiers & Smith, 2019). Exploratory comments enable the researcher to identify important features of the interview, such as certain linguistic characteristics (e.g., tone, emphasis, etc.; Spiers & Smith, 2019). It is from this initial

exploration that additional depth can be discovered through interpretation and theme development. Upon application of this process to each transcript, they were then exported into the qualitative software NVivo®, whereby the process was repeated to allow for any further concepts to arise and modification of previous theme classifications. Finally, once complete for each transcription, themes were able to be examined and analysed as a whole with the assistance of NVivo© coding features. Sample transcripts and analyses were provided to a research supervisor (JS) for checking and additional input, and to ensure researcher congruence. Further, to ensure validity, participants were provided with a copy of their transcripts and offered the opportunity to give any further clarification or amendments they felt necessary. Results of this analysis are presented thematically, with the inclusion of quotes to illustrate and support findings. Individual participants' experiences will be represented throughout the exploration of themes, as well as the agreements and dichotomies between these and the cohort as a whole.

6.3 Results

Analysis of interviews resulted in the establishment of three main domains, in which individual themes are presented. It should be noted that due to the number of interviews, at times there were dozens of quotes to support a particular theme. In order to remain succinct, and in keeping with current practice in IPA methodology, only those providing the most illustrative overall representation of the theme have been presented, whilst ensuring that all participants are included in the final results. Participants are referred to using a pseudonym to protect confidentiality. An overview of domains and themes are presented in Table 6–3. Standard ellipses (…) indicates omitted text (text not relevant); [sic] indicates quote transcribed as is despite grammatical errors, and en dash (–) is used to denote a short pause. Quotes may be in response to any of the four campaign images, or the campaigns overall. Where a specific image being referenced is important for context, it is denoted in brackets.

Table 6–3

Overview of Major Domains and Themes

Domain	Themes
Effect on present or past self	*Confirmation and justification of the eating disorder*
	Campaigns as potential triggers
	Reinforcing fears of food and weight gain
Effect on others	*Potential to impact vulnerable populations*
	Stigmatisation of persons in larger bodies
Campaign attributes	*Recognition of necessity*
	Negative associations
	Recommendations for improvement

Effect on Present or Past Self

One of the most prominent themes that emerged throughout participant interviews was the effect of campaign exposure on the *self*. The *self* emerged as the present self; how this affected participants in the present moment, or the past self; how this would have affected them when they were in the grips of their ED. This distinction between present and past self depended on where the participant was in their ED journey and is evident in the use of tense throughout interviews.

Confirmation and justification of the eating disorder

That campaigns and their underlying messages confirmed and justified some of the thoughts pertinent to the participants' ED was consistently expressed. Sarah describes this as a *reiteration*, referring to her past self.

> From an eating disorder perspective I would say that it just reiterates – it just kind of reconfirms what I was thinking at the time that obesity is unhealthy and it needs to be avoided and for me that was – like it needs to be avoided at all costs. (Sarah–in response to Image 1)

A *reiteration* of thoughts was also reinforced by Sophie, when describing the impact of campaign exposure in a real–world setting.

> …if you see this out in real life you're like oh maybe it is the truth and it just kind of reiterates or it like justifies the umm, kind of the bad, or the anorexic thoughts in your brain even though you try so hard to fight them… (Sophie)

Another participant, Olivia, described the ways in which campaigns prevented her from recognising the seriousness of her condition, and the blame she attributes to campaigns for this.

> I guess in general campaigns like against certain foods or I guess obesity in general have been I guess ways to, that kept me in denial during in particular like pre-diagnosis… I think like anti-obesity campaigns play a role in that kind of justification of some of the behaviours that do become, I guess, out of proportion in eating disorders. So I guess it's easy for me to be angry or frustrated with the, I guess the diet culture of society that's reinforced by these kinds of messages and blame them for the issues. (Olivia)

When reflecting on how campaigns would have made her feel before she embarked on her recovery journey, May took on the persona of her ED, explaining how campaigns would have forced her to 'stay' with that persona.

> I think, maybe sort of just being like yeah see? Like you don't want to look like that so stay with me and do what I'm telling you because you know that's, that's what you're going to end up like if you stop following my rules and you stop restricting you'll just blow up like a balloon and you'll have toxic fat, literally that's like, you know, complete confirmation that I should stay in my miserable existence with my eating disorder. (May)

Campaigns as potential triggers

Not only was it evident that campaigns could reaffirm ED thoughts, but that they could also act as potential *triggers* (set off an ED thought or behaviour). This is evident in the following quote from Kate, who describes the triggering of an ED behaviour (purging) in response to Image 4.

> It makes you not want to eat, do you know what I mean, it would make you maybe want to throw it up. Maybe you just saw this having a meal and you're just like, oh, no, like I can't even think of all that fat inside of me, I need to get it out…

When then asked if she thought it was something she specifically would engage in, she responded:

> Possibly, definitely. I mean it's triggering whenever I see anything that like, maybe people are making fun of people's bodies and calling them fat, like it's always when you have what I have, it's always the fear that people will see you like fat with your grabbable gut and see it as like a negative thing, and to have your body associated with the word toxic, that's just kind of like a very self-loathing kind of word to have in your mind because it makes you not to like yourself. (Kate–in response to Image 4)

Also in response to Image 4, Charlotte spoke of the shame she internalised upon exposure that may lead her to restrict food.

> …you know, I see this and I go, well jeez, I'm carrying a bunch of fat on my gut at the moment. Wow, I can do that with my stomach. Jeez, is that what I look like inside? Gee, I – you know, and then I start going into that little hamster wheel of, well, the only way to, you know, fix this is to restrict food and then I'll go for a long walk and then I'll – it just – yeah, that's what it does for me. Because it's quite – again, you know, it's a very serious ad, but anyone who, you know, carries weight around their stomach would probably look at that and go oh my god, that's anxiety provoking… (Charlotte–in response to Image 4)

That campaigns could lead to a change in food choice was also explored by Sophie, though she acknowledged it depended on how susceptible she was feeling on the particular day.

> Yeah I'm definitely sensitive to it and I think like umm, if I was having a day where I wasn't feeling so good and I walked past this that would probably change my food or drink choice for the next, for the rest of the day, like some days would be fine I could

> walk past and be like that's awful and move on but umm, yeah there's like certain times you can't fight it back as much in your head. (Sophie–in response to Image 2)

Conversely for some, if a campaign was seen as factual, it was not a potential trigger, as discussed in the following quote from May.

> I think it's, it's very factual so, I don't have any strong emotional umm, you know from an eating disorder perspective, feelings umm, around it having any negative sort of connotations like there's no sort of feeling of triggering aspect from an eating disorder perspective for me, I just look at it more as factual, these are the facts… (May)

Similarly, another participant (Emma) explained that being able to relate to the campaign was an important factor in determining whether or not it would affect her.

> I feel like with my condition I'm so far away from being someone like that, so it doesn't really – like the previous ones may have prompted me – again, this one is just so far away from anything that I am at the moment, I've never had a gut like that and I hope I never will. So I guess it's sort of something that I don't automatically associate it with someone like me. I guess I still take notice, but it's not something that I'm particularly worried about or anything that will prompt to go in the wrong direction in regard to my disorder. (Emma–in response to Image 4)

In considering this quote, it seems that though Emma may have been prompted to go in the 'wrong direction' in previous campaigns, not being able to see herself reflected in the imagery used in campaign 4 lessened the likelihood of her turning to her ED.

Reinforcing fears of food and weight gain

Fear was a word that appeared frequently in transcripts, in particular fear of food and fear of gaining weight. Consider the following quote from Kate, who describes Image 1 as positioning food as an *enemy*. Of interest is the use of *we* and *people like me,* indicating she thought the feeling may be universal to those with EDs.

> It's uncomfortable. It just pushes the idea that a lot of people like me feel that food is the enemy, like it's this dangerous thing that can hurt you, and obviously, that's not true, but that's how we feel and this kind of provokes that unhealthy idea that we deal with. (Kate–in response to Image 1)

Also responding to Image 1, another participant (Ella) reflected on how the campaign would have induced fear when she was in the midst of her ED, as well as acknowledging this fear still lingers for her in the present.

> I think perhaps a few years ago it would have been fear inducing for me, now I think I'm able to like look at it and kind of separate myself I guess from the word obese, but I think it still plays into, like at the moment it still plays into the fear of putting on weight and the fear of losing control and becoming obese or overweight. (Ella–in response to Image 1)

Emma spoke about fear in the present tense, and how Image 4 would enhance her fears of weight gain, as well as in people who are considered obese.

> It's pretty scary seeing what's inside of that person and seeing the word toxic, it really makes me get scared of getting obese and I think that's a pretty obvious thing and a really scary sort of thing that scares me into wanting to lose weight if I was an obese person. (Emma–in response to Image 4)

This was further reiterated by Hannah, who felt a particular sensitivity to the stomach visuals presented in Image 4.

> I think it just perpetuates, I know it would perpetuate my fear of I've got a really – my stomach is one of the areas that I'm particularly most sensitive to and it probably, it probably, this particular image almost reinforces that particular negative belief. (Hannah–in response to Image 4)

Effect on Others

As well as discussing the effect campaigns had on themselves, participants often addressed the way they thought it could affect others, in particular vulnerable populations and persons living in larger bodies.

Potential to impact vulnerable populations

Sarah was consistent in her belief that campaigns that are distributed on a population-based scale have the potential to negatively impact people who may be vulnerable to that message. When reflecting on Image 2, she said;

> …I think that any advertising – anything that says you can't have a certain food or drink or whatever is detrimental to the population who are trying to restrict that thing. (Sarah–in response to Image 2)

Then, after stating she does not believe in dietary restriction of any sort unless it was allergy-specific, reaffirmed this notion in response to Image 3.

> …but then also saying if you swap things you will lose weight implies that you need to lose weight, and any campaign that says you need to lose weight can be detrimental to those who don't need to lose weight. There is a lot of people who need to put on weight and that just continues to reinforce the overall [sic] we need to lose weight. (Sarah–in response to Image 3)

That campaigns could potentially impact vulnerable populations was reinforced by Olivia, at the same time acknowledging that there are people who would likely not be affected at all.

> Yeah, I guess the average person probably wouldn't be too affected because they'll, they'd see the word obesity and go oh well that's not necessarily me. If they're not obese or something like that or if they're normal weight they'd go oh yeah, that campaign doesn't apply to me and kind of ignore it and continue with the day. But I guess the concern is that people who are vulnerable to eating disorders or in their early stages can use it as fuel I guess to develop that even further… (Olivia–in response to Image 1)

Also referring to Image 1, Kate described a cumulative effect, where ongoing exposure to messaging could eventuate in an ED, particularly in younger audiences.

> It's like a slippery slope. It starts promoting that idea in their heads, especially for younger people that are more susceptible, it kind of puts that idea in their minds that like, hi, like you should associate this as being bad, and that just can kind of like over time fester and then become an eating disorder. (Kate)

The notion of a *cumulative effect* was also explored by May, who in response to the idea that the campaigns she had been shown were advertised on a population-based scale, spoke of concern particularly for young people.

> …It does make me worry, umm that, you know even young children seeing this who, you know, have a genetic predisposition to having an eating disorder and may already have those personality characteristics that also kind of really put them in that zone of developing one, and then they see things like this and this could be the thing starts, they decide that they're not drinking anything other than water and umm, that

> becomes a rule and then you know who knows what the next rule is and the next one and before you know it they've got a full blown eating disorder. (May)

However, May also identified that though campaigns could be harmful to vulnerable audiences, they were also relevant and perhaps necessary for others.

> I guess if someone has an eating disorder and they see that it's just going to reinforce to them that they don't want that toxic, so that's you know perfect – plays right into the eating disorders hands, toxic fat, you don't want any of that toxic fat, umm so for someone with anorexia or orthorexia that's just, perfect, because it's like right, see the fat is toxic don't want any of that inside me. So from that perspective I guess there's a danger that it could affect people in that way, the vulnerable people who are vulnerable to eating disorders, however I do think it's highly effective in making people think about what's actually going on inside when you have you know, a visible umm, you know overhanging gut. (May–in response to Image 4)

Stigmatisation of persons in larger bodies

In considering the ways in which campaigns could affect others, many spoke of how they felt they were inherently stigmatising towards persons in larger bodies. This often involved feelings of shame and guilt, as well as blame directed towards the individual for their size and weight. An example of this is the following excerpt from Olivia, who took issue with the use of a slim model and the paradox that this represented.

> I think the biggest issue for me with this particular image is the fact that the person in the picture is already quite thin and seems quite healthy – if you're struggling with body image and might be even a little bit larger than this person, but not necessarily overweight or at risk of anything yeah, I think it would be quite difficult to see – using the model that they did means that a large portion of the population are I guess bigger

> than that person. And the fact that they're saying that her drinking the soft drink is bad makes that even more monumental for someone who is larger than her. The fact that she's drinking herself fat by drinking the soda, like what would that look like to someone who is of a larger weight but not necessarily again at risk of the things that they're trying to prevent. (Olivia–in response to Image 2)

Kate also believed campaigns were offensive to those in larger bodies, stating:

> You know, many people are going to look at that and have a stomach that looks exactly like that, and to then be told that the fat inside themselves is toxic, that's just going to make them feel bad about themselves. (Kate–in response to Image 4)

The notion of shame was also expressed directly by Elizabeth when considering the message that Image 1 was sending to audiences.

> I just think that you shouldn't be telling people what – specifically what foods to eat, because it's a lifestyle. Eating that many chips isn't going to make you obese. And what's wrong with that? It's – it's sort of shaming people for being obese as well. (Elizabeth–in response to Image 1)

Similar sentiments were expressed by Hannah, who described Image 2 as *demonising.*

> … I mean it's very – it demonises those people doesn't it? It really says, says to them, you're not as valued because of your weight. You're fat, you probably, it kind of generalises that people have unhealthy habits, yeah I think that's probably – it certainly would be quite offensive I could imagine to those people. (Hannah–in response to Image 2)

Additionally, in considering blame, Ella expressed concern that campaigns failed to recognise the external factors contributing to an individual's weight status.

> I think, I don't really like health campaigns particularly like this because as I said, like a few years ago this would have been something that like I would have seen the word obesity and kind of been very scared and associated it with myself, and I just don't think that this kind of, these kind of campaigns are quite blamatory and they don't, like they blame the person quite a lot and don't really focus on the socio-economic factors of obesity, they just kind of focus on obese people eat chips, obese people eat a lot. (Ella–in response to Image 1)

Blame was reiterated by Charlotte in response to Image 2, also recognising the paradox of the slim model used in this campaign.

> It's a very confusing ad and again it feels very blamey, especially when you're saying, you know, don't drink yourself fat, that's quite a stark statement but you're showing me a picture of a quite obviously slim, skinny person pouring soft drink down their face for some inexplicable reason. (Charlotte–in response to Image 2)

Campaign Attributes

The previous themes demonstrated that participants spoke candidly about the ways in which they, and perceived others to, experience campaigns. However, what also stood out was the way they referred to specific aspects of the campaigns directly. These descriptions were less related to experience, but provided important insight into interpretation and factors they deemed to be noteworthy.

Recognition of necessity

Though participants did often express criticism towards campaigns, at times they also recognised that overweight and obesity are highly prevalent conditions carrying both health and economic burdens that need to be considered. They also seemed to grapple with the

concept that, overall, messages may have a positive effect on a large proportion of the population. In the case of Olivia, this was expressed with underlying tones of empathy.

> I think you can't really blame the person who came up with the strategy or the people who promoted it and spent money on disseminating it. I think that generally the intention is good and I think the net effect in terms of you know, weight loss, creating awareness amongst people who might not be aware is good but I don't think it takes into consideration the impact on the individuals who already consider these things to I guess a normal level. (Olivia–in response to Image 4)

> …So I'm kind of, I get the to–and–fro between someone who's an eating disorder patient trying to get better versus a medical student who wants the general health of the population improve… (Olivia–on campaigns overall)

In considering Image 2, Charlotte also expressed overall approval of the message to drink more water, however thought the delivery of the message could be improved upon.

> I have no issue with the message, I think that's a great message, I drink heaps of water. But again, telling using [sic] that essentially if you choose to drink a soft drink, that is what you're drinking. I'm not sure if that's helpful for people – I think people should drink more water – I think that that's a good message, but I don't think people should be shamed for choosing to drink soft drink. (Charlotte–in response to Image 2)

The contention of both overweight/obesity and ED prevention was also evident for May.

> … I grapple with it all the time to be honest because obesity is a massive, massive issue – it is a massive drain on the public health system but then as are eating disorders – and they're continuing to rise, umm and the age of onset is getting

> younger and you know there are all these frightening statistics around that as well so it's like neither of them can be ignored – it's that fine balance of yes we need anti-obesity campaigning – absolutely we do, but how can we do it in a way that's sensitive to those who are susceptible to eating disorders. (May)

She then went on to describe a personal anecdote whereby a national exercise campaign reinforced her own ED beliefs, however acknowledges that overall it was likely beneficial for the majority of the population.

> …I remember when I was you know in the midst of my eating disorder back in New Zealand there was a campaign around – around 30 minutes a day you've got to push play – for exercise, and I was addicted to exercise and it was all over the TV, it was on the radio, there were massive billboards and to me, that was just like a red flag to a bull. So when I had to give up exercise completely it was like no, no, I'm unhealthy I've got to do at least 30 minutes a day, like they're saying, its everywhere – so in that way it's like – for the majority of the population that was a great message, it was attainable, it was realistic like all of those things right, there's no way that they could have made that message less triggering, the message is what it is and it needs to happen but yet that, yeah. (May)

Negative associations

A persistent component of campaigns that arose in many descriptions from participants was the way in which they often created negative and moral associations for both food and body size. Olivia spoke of this in reference to likening food to cigarettes.

> I guess the biggest issue for me is just the link of the particular food with obesity and thus, cancer and smoking and that kind of negative approach. Like as someone who's

> trying to reintroduce these kinds of foods that are quite difficult for me. (Olivia–in response to Image 1)

Kate also felt that Image 1 associated fries with cigarettes and cancer, and that such an association was potentially harmful.

> Because obesity is a lot more complex than just eating fries. You know, there's a lot of genetic things that goes into it, culture, environment, and just to kind of make it out like one fry is like one cigarette, it seems a bit over the top, but a bit harmful as well – It kind of encourages this idea that like, food can be as bad as cigarettes, which isn't the case. (Kate–in response to Image 1)

Another concern was the way that campaigns intrinsically labelled fatness as a *bad* and negative thing.

> Probably the word fat, and the fact that they're just targeting that word and placing so much emphasis on it and adding so much meaning to it – a lot of the reading I've been doing is about you know the power of the messages we're given and that thin is good fat is bad, whereas every body is right in its own way and there's perfectly healthy people in larger bodies, and this particular image sort of demonises fat people as if it's the worst thing that can happen to you and I think that's fairly irresponsible to be honest. (Hannah–in response to Image 2)

This is reiterated by Grace, whose first response to Image 1 was "I don't like it". When asked to elaborate, she responded:

> I think obesity is a – it's creating a negative connotation with the word, as if being obese is, it makes it like being obese is the worst thing in the world and you are going to die if you are obese, umm, and, I guess then it also, with the fries in there, that also now makes fries seem like they are a bad food. (Grace–in response to Image 1)

Anna also spoke of campaigns placing moral value on – in this case a beverage – and that she found this type of narrative to be unhelpful in the overall context of health and wellbeing.

> … it's weighing in on this, there's a good type of food and there's a bad type of food, its moralising the drink she's got in her hands, and that kind of thinking is really harmful, particularly people with eating disorders, there is no such thing as a good food or a bad food. I think that the narrative needs to be changed around that because otherwise, that's why we get those comments in the tearoom like I'm being naughty today I'm having a slice of cake, then you've got the person eating the cake being like oh should I not be eating this? Umm if you take away the moral value of food, because there shouldn't be any, it would make conversations around health and wellbeing so much easier. (Anna–in response to Image 2)

Recommendations for improvement

Finally, when participants were asked how they thought campaigns could be improved, there was consistent support for messages to encourage and highlight the benefits of healthy behaviours opposed to shaming undesirable ones. Participants also frequently commented on their preference for Image 3 compared to all others because it was less stigmatising and did not promote complete restriction.

> …I think that this particular message is a lot, a lot more balanced in the way it's approaching the overall issue which is obesity and I think it's probably, it would certainly I could imagine be less offensive to somebody who is overweight than an image that directly calls them fat or those sorts of things… (Hannah–in response to Image 3)

> I know that in advertising there's the shock value and you need to grab attention and what not, but I think for people's mental health, it would be ideal if they could target the positive health behaviours as positive whether it's got a happy heart doing skipping rope or something along those lines, so rather than necessarily target the problem per se, encourage healthy choices and other related factors (Hannah–on campaigns overall)

Charlotte shared a similar perspective, on both a preference for Image 3, and campaigns overall.

> …I do like this idea because, you know, we should be encouraging people to make small changes in their life, not giant, crazy ones they can't sustain – I think it's a far more measured way to promote, you know, balance. (Charlotte–in response to Image 3)

> …Just telling people don't eat that, don't eat that, you should move, for some people that's going to be yep, great, you've told me what I need to do, off I go. But for a large proportion of people it's not simple. And yeah, the big stick doesn't always help. It's not telling them they can't eat X, Y, Z, but it's telling them hey, do you know how great this stuff is as well? (Charlotte–on campaigns overall)

A final reflection from Anna on campaigns overall addressed the need to focus on inclusivity, including considering mental health implications.

> I think that society has a long way to go as far as accepting people in all sorts of bodies. As a marketer, all of those campaigns, except for the swap it out one, are quite effective in their messaging but I think – I think that some work needs to be done with those kinds of organisations to change the messaging – they put in so much money and resources into trying to end diseases like cancer, and heart disease, and stuff like

that but mental health is something that's quite often overlooked. So I think that if I could change anything, I would go and educate, get people like the Butterfly Foundation and those kinds of organisations to go in and educate those businesses on the effects that those advertising campaigns are having and have consultants and things so that they can make them more inclusive and less damaging, because you don't know what everyone else is going through, and so having those kinds of images can really affect someone. (Anna)

6.4 Discussion

This study sought to explore the experiences of participants currently or previously diagnosed with an eating disorder when exposed to real–life public health anti-obesity campaigns. As a follow on from Study 2, this research enabled further investigation of the previous findings that demonstrated a negative influence of campaigns on ED related outcomes. In particular, it allowed for the thorough exploration into *why*, and *how* exactly, campaigns were contributing to ED thoughts and behaviours in a high-risk population. This is particularly important in light of our recent findings that there is a distinct lack of research into public health campaigns and their effect on such outcomes (Study 1; Bristow et al., 2020).

The all-female study sample was not intentional. Rather, it reflected the population group that responded to the study advertisements. The advertising material did not specify any gender, and invited any person diagnosed with an ED to take part in the interview process. Despite this, only females responded during the recruitment period. This is possibly due to the higher proportion of females who experience EDs compared to males, despite prevalence increasing in males in recent years (Peckmezian et al., 2017). Additionally, males are less likely to seek help for an ED due to perceived stigma, often remaining undiagnosed (Griffiths et al., 2015). It is this perceived stigma as well as lower rates of diagnosis that may result in greater hesitancy in sharing their experiences. Regardless, the all-female sample provided greater homogeneity than would have been possible with the participation of more than one gender. Additionally, in relation to participant stages of diagnosis, though some participants could clearly distinguish between either presently diagnosed or fully recovered, others struggled to identify with either of these endpoints and felt their experience to be fluid; the ED and its related thoughts and behaviours come and go. This is consistent with recent research whereby recovery was described by participants as non-linear and *fuzzy*, with no

clear start or end points (LaMarre & Rice, 2021). Hence, it was difficult to provide an analysis that distinguished clearly between these categories. Instead, the analysis aimed to highlight participant use of tense to indicate which stage they felt they belonged to (i.e. *past* and *present* self).

In considering the domains presented, it seems suitable to first address the way participants experienced campaign exposure themselves. That the *self* was divided in two; me as my present self and me as my past self, was congruent with participants being a mix of those who were in the throes of their ED, or who were well into recovery. Nonetheless, it was beneficial to witness participants reflect back to a time in which they would have been most vulnerable, and reflect upon the feelings that would have arisen during that time. Likewise, the immediate influence on those still dealing with their condition in the present offered valuable insight. Whether reflecting on the present or past self, it was clear that participants felt campaigns further justified thoughts and feelings reminiscent of their ED. Described as either *reiteration, confirmation,* or *justification,* the message was consistent in the way participants described feeling as though campaigns encouraged their disordered thoughts. Similarly, and perhaps leading on from a confirmation of ED thoughts, was the ability for campaigns to trigger ED symptoms. Importantly, this concerned not just reinforcing a thought, but setting off an actual behaviour. For example, "it would make you maybe want to throw it up", or implying they would start restricting and exercising for longer in response to some aspects of campaigns, demonstrates the worrying impact campaigns can have on not just unhealthy thoughts, but actual behaviours in those who are extremely vulnerable. The final theme in the *Effect on self* domain, *Reinforcing fears of food and weight gain*, also points to the ways in which campaigns can exacerbate these beliefs typical of ED populations. Given an intense fear of food and gaining weight is a key criterion for the diagnosis of EDs (APA, 2013), statements such as "it really makes me scared of getting

obese" are cause for concern when considering exposure in this population group. It is also important to consider in the context of a recent retrospective cohort study of 2901 patients being treated for EDs, in which 18% attributed the onset of their ED to PHMs (Mensinger et al., 2021). Together, these findings highlight the potential for unintended harm in this population group.

Further to the way in which participants experienced campaigns themselves was how they perceived it may affect others. Most notable was the campaigns' potential influence on vulnerable populations, in particular younger audiences or persons susceptible to developing an ED. What was interesting about these observations was that numerous participants commented on the notion of campaign effects being cumulative. That is, whilst brief exposure to one campaign may not cause significant damage, it was the repeated exposure to messages around dieting and weight loss that could fuel the development of an ED. The idea of a dose-response relationship between media messages on thinness and increased ED symptomology has been previously explored (Andersen & DiDomenico, 1992; Vaughan & Fouts, 2003). However, just as participants acknowledged vulnerable populations, they also recognised that for many people it may be "water off a duck's back" – [verbatim]. It is interesting then to consider the ethical considerations of public health campaigns on a population-based scale, which as addressed in Chapter 1 (Section 1.5.2) is still the subject of great debate (Guttman, 2017; Guttman & Salmon, 2004; Puhl & Heuer, 2010). The question of whether potential harms caused to vulnerable audiences are offset by potential benefits to the rest of the population is complex, and has been raised previously (Bayer & Fairchild, 2016; Cho & Salmon, 2006). Although these findings may not answer the question entirely, they do provide further insight into how exactly vulnerable audiences may be affected, from the perspective of those most at risk.

That participants believed campaigns to be stigmatising is consistent with findings from both our systematic literature review (Bristow et al., 2020), and other studies in the field that highlight the stigma and bias experienced by persons in larger bodies (Puhl, 2013; Puhl et al., 2013; Thomas et al., 2008; Young et al., 2016). Most similar to the present study however is the study by Lewis and colleagues (2010), who in a qualitative study in adults classified as having obesity, reported participants feeling blamed and stigmatised by public health anti-obesity messages. In this study, participants said campaigns positioned them as "failures" and lazy, and that being overweight was simply a choice (Lewis et al., 2010). These views were in line with those expressed in the present study, and further contribute to the ongoing concern of stigmatisation experienced by persons living in larger bodies. It also adds to the discussion of the use of shame and blame as tactics to force behaviour change, whilst neglecting the environmental, societal, and biological influences on a person's weight status (Guttman & Salmon, 2004; Puhl & Heuer, 2009, 2010; Thille et al., 2017; Vartanian & Smyth, 2013).

The final domain, presenting participants' reflections on the campaigns themselves, provided interesting perspective into the necessity of campaigns and recommendations for future improvement. What was clear in analysing the results is that participants were able to see both positives and negatives of the campaigns. They recognised overweight and obesity as a public health issue worthy of addressing, but were critical of the enforcement of weight loss on the population as a whole. It was evident that perhaps the greatest concern they had with the campaigns was the continued association of food and overweight/obesity as overtly negative and things to be avoided. It was this contribution to the ongoing narrative of food and weight as holding moral value that they objected to the most. Hence, recommendations for improvement centred on the promotion of the positive benefits of desired health behaviours, opposed to shaming behaviours perceived as negative. These recommendations

are consistent with those from the NEDC, who suggest that healthy messages should promote the adoption of healthy behaviours for overall physical health and emotional wellbeing, opposed to promoting the elimination of foods and moral judgements on dietary choices (Watson, 2011).

Overall, it is worthwhile to consider both the convergences and divergences evident in participants' experiences. Though there was considerable agreement in the data, there were also examples of incongruity when perspectives and experiences did not align. This occurred both within the same person (i.e. their experience with one campaign was strikingly different to another), as well as between participants. Granted it would not be expected, despite the sample being homogenous, that participants would respond in exactly the same way, nor that their responses between each campaign would remain uniform (reflecting back on the methodology, these images were purposively selected on the basis of their differences). However, these examples (for reference see *Campaigns as potential triggers)* effectively demonstrate the fluidity of human experience and remind us that while people may belong to a particular population group (in this case EDs), their experiences remain individual. The idea of a sufferer's experience being unique to them has been previously explored in patients with Anorexia (Button & Warren, 2001). This variance in experience is also a nod to the idiographic ideology utilised in IPA, whereby the importance of every individual's perspectives is considered. It is in this consideration of every individual that these variances in experience can be fully explored.

The findings of this study contribute to growing concern over anti-obesity public health campaigns and their impact on at-risk audiences. It can be seen through the detailed and thorough participant reflections that not only may these messages justify the thoughts and feelings pertinent to their ED, but may also encourage the engagement of unhealthy weight control behaviours (UWCB). This is consistent with the findings from Study 2; however,

these interviews allowed more of an insightful look into the why and the how PHMs are affecting vulnerable audiences. This exploration also enabled the identification of certain characteristics of campaigns that were contributing to the uneasiness felt by participants, in particular their stigmatising and blaming nature, contribution to unhelpful narratives around weight and health, and demonisation of food and weight. The benefit of this finding is that it points directly to actionable areas of improvement. It enables government and health authorities to reflect on their current practices and create sustainable change. Although it seems there is uncontested agreement that campaigns addressing overweight and obesity are necessary, the present study adds to the growing body of literature indicating substantial change and care is needed to minimise the negative and potentially detrimental impacts on vulnerable audiences.

6.4.1 Limitations

By nature of the IPA approach, and qualitative research in general, the findings of this study are not generalisable as such to the population. Though the in-depth exploration of participant experience offers valuable insight into the issues, qualitative research cannot, and does not, aim to establish generalisable findings. In addition, intrinsic to IPA is the process of interpretation, meaning the analysis of the data provided is subjective and may differ in presentation between researchers. To address this and ensure multiple perspectives were considered, triangulation was performed in collaboration with a research supervisor (JS). Researcher reflexivity was also carried out across the entire study cycle. In the planning of the interview schedule, I liaised with supervisor JS to ensure questions were not leading or presumptuous and allowed participants to share their own perspectives freely and without boundaries. During interviews themselves, I was constantly mindful to not project my own experiences, but simply listen to participants and prompt where I felt necessary, based on their interpretations only. Following this, when it came to analysing interviews, I remained

conscious of how my own perceptions may be influencing interpretations, and in response read and re-read transcripts multiple times to stay with participant perspectives and remove my own. Finally, in selecting data to present in the final results, it was important to include data that diverged and challenged some of the more consistent themes to demonstrate that experience was individual and participants were not always in agreement.

Further, the richness of the data gathered; interviews, each 4000–7000 words in length, means that much of the data cannot be presented here (de-identified transcripts are available to view in Appendix L). Therefore, it was the role of the researcher to analyse the interviews and select and report on what were ascertained to be the most significant findings in the most authentic way possible whilst also adhering to the efficient and concise rigour of academic writing. Finally, due to the COVID-19 global pandemic all interviews were held via videoconferencing technology. Though effort was made to make the participants feel as comfortable as possible, the absence of in-person contact may have resulted in a lesser level of rapport being developed. However, it was felt that still being able to virtually see one another assisted in developing a friendly level of rapport.

6.5 Summation

Study 3 concludes the final research component of this PhD Thesis. This study provided additional insight into, and elaborated on, previous findings from Studies 1 and 2 (Chapters 3, 4). Specifically, it further contributes to the body of evidence provided throughout this Thesis on the harmful influence of anti-obesity campaigns on factors related to EDs. In this study in particular, this influence was highlighted by a population group most vulnerable to campaign messages. Such an in-depth exploration into this topic, with this population group in particular, has not before been performed.

It is clear in considering participants' responses throughout the interviews that they hold concern not only for themselves, but for others, when exposed to such campaigns. As was stated in the discussion, it is difficult to quantify the effects of ongoing exposure, such as that experienced in day-to-day life. However, if considering that some participants expressed a likelihood of engaging in dangerous behaviour for weight control upon viewing images, it is plausible to think that ongoing exposure is likely to exacerbate the effects seen in a short 1–hour time frame. It is appropriate here to now acknowledge an event that occurred following a participant interview, in which they made contact to further express how they were affected by exposure to the campaigns. Before presenting the below email, it is important to state that participants were provided with a list of resources including support services both before and after their participation, due to the sensitive nature of interviews. The participant advised;

> "I just wanted to follow up because I thought this might be interesting for your research. To start with, I am fine and have adequate support in place and have not been negatively impacted by our session.

> Since our conversation I have found myself thinking a lot about the fourth photo and the 'grabbable belly'. I have caught myself trying to grab my belly to see if I am 'fat', and also judging other people for having a grabbable belly. I have not thought about the toxic fat part of the photo, but I am mentally assessing whether mine or others have 'too much fat' based on if I think I could grab their 'fat'. These assessments have been negative; if I think someone has a grabbable belly, I perceive that person to be 'weak' in terms of not controlling their diet.
>
> I have had to use my therapy strategies to stop myself from making this assessment. I think that's important to note as it's been a fortnight since our session and I have thought about it every day. If I didn't have the therapy sessions to teach me strategies I think this would have really contributed to my binging and fasting cycle. I caught myself changing my food choices because I was afraid of getting a grabbable belly.
>
> I thought this might be interesting for you to know, but please note I am well. However, I think if I wasn't in a strong mental space that advert would have become a benchmark for me to assess my overall health and physical appearance.
>
> I am happy to discuss this further if you think it would contribute further to your research."

Though it was concerning to receive this information, and the participant was followed up to ensure they were indeed okay and had the appropriate support system in place, it highlighted just how significant an impact PHMs can have on vulnerable audiences. Further, though this was not officially part of the study results (hence not presented in the official findings), it was felt to be important information to the overall research project and in order to ensure full transparency. This information has also been included in the final project report submitted to the approving ethics committee.

With all of this considered, it is evident that this topic is one of great sensitivity, with demonstrable adverse effects on audiences. Given campaigns of this nature are presently being distributed on a population-based scale, I implore those involved to consider the implications of this, and propose a more sensitive approach to public health anti-obesity campaigns. This recommendation, as well as additional future recommendations and the present study in the overall context of this Thesis are explored further in Chapter 7.

Chapter 7: Thesis Discussion

This PhD research project set out to investigate concerns of the potential adverse, unintended effects of public health anti-obesity campaigns and their associated messages (PHMs) on risk factors related to the development of eating disorders (EDs). Firstly, the systematic literature review (SLR; Study 1) provided evidence to suggest that PHMs may have deleterious effects on audiences. However, it was also identified that there is a lack of studies explicitly measuring known risk factors for EDs directly after exposure to PHMs. Informed by these findings, the second research study presented (Study 2) aimed to investigate the effects of direct exposure to PHMs on ED risk factors measured both pre-and-post exposure. This study demonstrated significant changes in outcome measures, with risk factors increasing after viewing campaign images. Persons displaying high ED symptomology were also identified as most susceptible to the effects of campaign exposure. To further understand these effects, qualitative interviews were conducted with participants diagnosed with EDs to obtain insight into how they experience and perceive PHMs (Study 3). Analysis of these interviews further established the potential for campaigns to cause unintended harm. The findings from each of these research phases provide valuable contributions to a relatively scarce field of inquiry. In particular, they highlight the need for reform in this area for adverse effects on vulnerable audiences to be kept to a minimum. The following sections summarise the key findings of this Thesis, followed by subsequent implications and directions for future research and practice. Finally, the strengths and limitations of the Thesis are addressed before a final concluding remark is given.

7.1 Summary of Key Findings

A summary of key findings is presented as pertains to each of the studies in this Thesis, the associated objectives, and the body of work as a whole.

Anti-Obesity Public Health Messages and Risk Factors for Disordered Eating

The first objective of this Thesis was to provide an overview of the existing literature on PHMs and risk factors for EDs. A review of this nature had, to our knowledge, never been performed previously. The 12 studies included in this SLR broadly measured stigma, body and weight dissatisfaction, self-esteem, drive for thinness/thin internalisation, and ED behaviour (bulimia). That PHMs were found to stigmatise larger body types supports early concerns of the stigmatising nature of public health communications (Guttman & Salmon, 2004; MacLean et al., 2009). These findings have since been supported by a recent U.S. study that found over 40% of anti-obesity campaigns contained stigmatising content (Turner et al., 2020). The reported increase in thin internalisation/drive for thinness is also well-supported by previous studies of traditional (Miller & Halberstadt, 2005; Stice et al., 1994), and social (Mingoia et al., 2017), media exposure. The inconsistency in findings concerning body dissatisfaction and self-esteem reflects the literature on similar exposure stimuli in social networking sites, with a recent systematic review reporting mixed results, particularly for body dissatisfaction (Holland & Tiggemann, 2016). The review also highlighted that only four studies measured body dissatisfaction experimentally, further supporting the findings of this SLR that there is a gap in the literature in reporting ED outcomes such as body dissatisfaction. Finally, that only one study directly measured a specific ED behaviour (bulimia intentions) speaks to the difficulty in reporting on these outcomes, perhaps due in some part to their secretive nature (Peckmezian et al., 2017).

When considering the findings of the studies included in the review, it is vital to highlight the lack of consistency in how outcomes were defined. For example, we considered the outcome of *stigma* as negative judgements based on a particular attribute (weight). Although some studies directly identified the outcome as stigma, others indirectly described it as *negative feelings towards*, or ratings of motivation in, persons with overweight or obesity. Some studies used previously validated questionnaires to measure ED risk factors

(e.g., the EDE-Q; Fairburn, 1994), but others did not utilise such tools. Further, many studies measured ED outcomes as secondary or moderating outcome variables, instead of focusing solely on these factors. This lack of consideration for ED risk factors as primary outcomes is consistent with previous findings that ED outcomes are often not adequately factored into intervention studies (Peckmezian & Hay, 2017). As such, although the SLR provided some evidence of the adverse effects caused by PHMs, the lack of consistency in reporting outcomes and measures across all studies and the absence of ED risk factors as primary outcome measures made it difficult to draw definite conclusions. This finding highlighted the need for future research studies to directly investigate the influence of PHMs on specific ED risk factors, using clear definitions and outcome measures.

Effects of Anti-Obesity Public Health Advertisements on Eating Disorder Risk Factors

The objective of Study 2 was to measure the effects of anti-obesity campaign exposure on risk factors for the development of EDs. This was informed by the findings from Study 1 that there is a lack of research directly investigating the effects of campaign exposure on clearly defined risk factors for EDs. As such, the study was designed to measure five primary outcomes that are proven risk factors for the development of EDs (Fairburn & Beglin, 1994) and have been implemented in previous similar research (Champion & Furnham, 1999; Knobloch-Westerwick & Crane, 2011; Roehrig et al., 2008; Shaw & Kemeny, 1989; Simpson & Mazzeo, 2017). Additionally, it sought to identify any potentially vulnerable subgroups of the sample. The pre-post design enabled the detection of any changes in primary outcome measures from baseline to post-exposure.

The statistically significant increase in desire to control weight and shape, desire to engage in unhealthy weight control behaviours (UWCB), and decrease in weight satisfaction following exposure to campaigns further supports the findings from Study 1 that such

campaigns have the potential to cause harm. This provides empirical evidence to support initial concerns voiced by the National Eating Disorder Collaboration (NEDC; Watson, 2011), and contributes to the growing body of evidence of the unintended consequences of PHMs (Barry et al., 2014; Dixon et al., 2015; Lewis et al., 2010; Puhl, 2013; Puhl et al., 2013; Roehrig et al., 2008; Shaw & Kemeny, 1989; Simpson et al., 2019; Thomas et al., 2014; Young et al., 2016). Although image type influenced the extent to which outcome measures were affected—many changes were seen only in response to image 1— that UWCB desire increased on average across all image conditions is cause for concern given unhealthy dieting practices are one of the strongest predictors for the onset of EDs (Watson et al., 2010). Additionally, the finding that individuals with high ED symptomology and high levels of thin internalisation showed greater susceptibility to campaigns reiterates concerns that campaigns may harm audiences for which they are not intended (Walls et al., 2011).

The findings of this study are essential to consider in the greater context of environmental exposure. That is, campaigns like those presented to participants do not exist in a vacuum, with many other related stimuli entering our consciousness every day. This study generated significant findings after only a small amount of exposure time and to only one form of stimuli. Previous studies on the effects of other forms of media, including traditional (e.g., magazines) and social (e.g., Instagram), have also reported harmful effects on ED risk factors (Anschutz et al., 2011; Harper & Tiggemann, 2008; Holland & Tiggemann, 2016; Lopez-Guimera et al., 2010; Mingoia et al., 2017; Slevec & Tiggemann, 2011). Therefore, the impact of ongoing, combined exposure must be carefully considered. These implications, as well as recommendations for improvement, are addressed in Section 7.2.

Perceptions and Experiences of Anti-Obesity Public Health Campaigns

Studies 1 and 2 identified that PHM exposure could negatively influence risk factors for the development of EDs. In particular, Study 2 highlighted persons with high levels of ED symptomology as particularly vulnerable. Informed by this, the objective of Study 3 was to explore how persons with EDs experience public health anti-obesity campaigns. In doing so, the valuable perspectives of 12 individuals likely to be most affected by campaigns were examined on a distinctively personal level and with great depth. An enquiry of this type, and in particular with this sample, has not been undertaken before. Through the rigorous evaluation process implemented in IPA research, the three main domains established and their subsequent themes demonstrated the consistencies and inconsistencies of human experience.

It was evident that all participants expressed concern over PHMs. Whether they were presently diagnosed or recovering from an ED did not seem to alter their perceptions, with even those well into recovery recognising the harmful impact PHMs would have had on them in the past and may continue to have on at-risk audiences into the future. This harm was thought to occur through various means, including: justification and reiteration of ED thoughts and beliefs, reinforcing fears of weight gain, stigmatising larger body types, or assigning moral value to food and weight. These findings build on those from Study 2 and explains as to why this audience are particularly vulnerable to campaigns. To our knowledge, the effects of PHM exposure in this population group, specifically, has not previously been explored. However, qualitative interviews with adults considered *obese* found that these individuals felt blamed and stigmatised by PHMs (Lewis et al., 2010). Interviews with children and their parents upon exposure to two government anti-obesity campaigns also found that parents, in particular, felt campaigns held the individual solely responsible for their health without considering the broader environmental influence (Thomas et al., 2014). Both of these studies are consistent with the views expressed by participants in Study 3.

That some participants believed campaigns could directly lead to engagement in starvation or purging behaviours aligns with the quantitative data in Study 2, whereby the desire to engage in unhealthy weight control behaviours was significantly increased, on average, across all image conditions. This is important to consider in the context of recent research demonstrating that in 2901 patients receiving high-level ED care, 18% attributed the onset of their ED to anti-obesity messaging (Mensinger et al., 2021). This further highlights the impact PHMs may be having on vulnerable audiences. It was also evident that despite being the most vulnerable, and arguably most affected population group, participants recognised the need for overweight/obesity prevention efforts to exist in some form and that such efforts are valuable in addressing the acknowledged growing prevalence of these conditions. Hence, participants believed that campaigns shouldn't be abolished entirely, but rather be refined to address the health issue of overweight and obesity in a way that is sensitive to all audiences. These suggestions align with previous critiques where the focus is not complete removal of campaigns, but rather modification to minimise potential harm (Bayer & Fairchild, 2016; Cho & Salmon, 2006; O'Dea, 2004b; Salas, 2015). Specifically, participants provided their perspectives on the most harmful elements of campaigns and ways in which campaigns could be improved. Broadly, these included focusing on positive rather than negative health outcomes, as well as a shift in narrative from weight-based to health-based measures, consistent with previous NEDC recommendations (Watson, 2011). These insights, gathered from a population group with valuable experience, should be considered in future health promotion efforts. Such considerations, alongside further implications and recommendations for future research and practice, will now be discussed.

7.2 Implications and Directions for Future Research and Practice

In light of the findings presented in this Thesis, it is necessary to consider future research efforts that can further explore the potential for adverse effects of PHM exposure

and implications for health professionals and public health overall. The results obtained in the three studies included in this Thesis can guide future research in the field and provide a sound rationale for the reviewing and adapting of public health efforts addressing overweight and obesity. This section will propose recommendations for future research before focusing on how current efforts may be improved, and considerations that need to be taken into account.

7.2.1 Future Research Directions

As was noted early in this Thesis (Introduction–Section 1.4), previous research has explored various strategies targeting overweight/obesity and their potential undesirable effect on ED related outcomes, including weight loss interventions (Butryn & Wadden, 2005; Da Luz et al., 2015; Peckmezian & Hay, 2017; Sim et al., 2013), kJ/kCal information on food labels and menus (Martinez et al., 2013; Romano et al., 2018; Simpson & Mazzeo, 2017), and school-based interventions in children (Austin et al., 2005; 2007; Davison & Deane, 2010; Lee et al., 2005). To date, the findings from each of these areas have been inconsistent. However, what is consistent are the findings from comprehensive reviews that demonstrate ED outcomes are not adequately measured or reported on when it comes to weight-loss efforts (Carter & Bulik, 2008; NEDC, 2017). Consequently, it is difficult to determine the real impact of anti-obesity efforts on ED risk factors when they are not sufficiently measured. This is especially true when considering anti-obesity PHMs. Our review (Study 1) noted a lack of consistency in the way outcome measures were defined, as well as measurement tools that were not evidence-based or supported by previous literature (e.g., validated psychometric questionnaires; Bristow et al., 2020). As such, it is strongly urged that any future research on overweight/obesity reduction carefully considers and plans for the measurement of clearly defined ED risk factors and that appropriate methods/tools are implemented to measure these. It is hoped that the approach and methodology used in Study 2 demonstrate that this is possible and acts as a guide for future research efforts.

More specifically, future research concerning anti-obesity PHMs needs to be considered. The empirical research studies presented in this Thesis (Study 2, 3) addressed some of the gaps in research in this field. However, although valuable contributions, they alone are not adequate to draw definite conclusions. Instead, they offer a starting point and rationale for future research studies to explore and elaborate on existing findings. There are a few areas, in particular, that would benefit from future investigation based on the results of these studies and the systematic review.

Firstly, Studies 2 and 3 were only able to explore outcomes in relation to a limited exposure time. In Study 2, survey participants viewed each image for less than 25 seconds on average, and qualitative interviews in Study 3 did not last longer than one hour. On the whole, this is a very short exposure time compared to the ongoing daily exposure of anti-obesity PHMs and other similar stimuli reinforcing weight loss. Therefore, exploring greater exposure times may more accurately represent what a participant experiences in real-world scenarios. Using a combination of stimuli (for example, PHMs and weight-loss product adverts) may also replicate a real-world environment more effectively. Replicating the findings from Study 2 would also provide some validation for generalisability. Additionally, the campaigns and accompanying images/messages used in Studies 1 and 2 mainly centred around diet and food intake. Though this was strategic (to ensure consistency), it does not consider other promoted efforts for weight loss, such as physical activity. Given excessive/compulsive engagement in physical activity is a risk factor for the development of EDs (Peckmezian et al., 2017), it would be beneficial for future research to explore the influence of exercise-based campaigns.

Finally, Study 3 uncovered the notion of a *cumulative effect*, with participants believing PHMs contribute to the development of EDs over time. Research supports that dieting frequency increases in response to exposure to thin-ideal images over 10 days

(Knobloch-Westerwick & Crane, 2011). Although there may be some ethical considerations in investigating the effects of long-term exposure given this potential dose-response relationship, longitudinal studies could provide valuable insight into how campaigns affect individuals, particularly vulnerable audiences, over a long period. However, care would need to be taken to provide adequate support to participants throughout exposure to avoid long-term harm.

7.2.2 Recommendations for Public Health Anti-Obesity Campaigns

The results of the studies included in this Thesis provide some evidence that current (~last 10 years) anti-obesity campaigns negatively influence risk factors associated with the development and exacerbation of EDs, in particular body dissatisfaction, desire for weight control (WC), desire to engage in unhealthy weight control behaviours (UWCB), and justification of pre-existing ED thoughts. That health campaigns have the potential to cause unintended harm is not a new concept. For decades, experts have expressed concern at the potential for adverse effects, particularly when audiences outside of the target audience are reached (Becker, 1993; Guttman, 2017; Guttman & Salmon, 2004), and especially about overweight/obesity efforts (Pausé, 2017; Tomiyama & Mann, 2013). Despite this, it seems there has been little shift in the way messages are curated and advertised to audiences. Therefore, it is important to consider how future efforts may be improved to avoid potential consequences. Informed by the findings of this Thesis, and consistent with the NEDC framework for weight-related public messages presented earlier in this dissertation (Section 1.5; Appendix A), the following are updated recommendations for those responsible for the creation and dissemination of public health anti-obesity campaigns.

First, do no harm

As one of the core principles of health promotion, campaigns must first consider the potential for harm to susceptible audiences. This principle is fundamental in light of the findings presented in this Thesis that anti-obesity PHMs have the potential to stigmatise persons in larger bodies and encourage UWCB, particularly in audiences for which the message is not intended. As such, efforts to mitigate harm as much as possible are necessary. The proceeding suggestions may assist in this process.

Avoid shaming/blaming tactics

Messages that solely blame the individual for their health condition fail to recognise the complex nature of modern health problems. Overweight/obesity are complex health issues with a myriad of contributors, many of which are not controlled by the individual themselves. Studies 1 and 3 highlighted that campaigns that blame and shame individuals could lead to increased weight stigma and negative feelings towards oneself. As such, neutral messages that do not solely hold the individual responsible are recommended.

Avoid weight-centric language and imagery

Campaigns that focus solely on weight loss and promote a desired weight or shape further perpetuate beliefs of weight as a sole indicator of health status and the notion of an ideal body type. In Studies 2 and 3, the image that had the most significant negative impact on audiences was the *Live Lighter* campaign, which was heavily focused on weight and body shape. Instead, weight-neutral messaging encouraging health at all sizes is proposed.

Focus on benefits

In shifting from weight-focused messaging and the consequences of excess weight, participants in Study 3 consistently suggested that messages should focus on the benefits of the desired behaviour change, as opposed to highlighting the negatives of the undesired behaviour (e.g., the positive effects of water versus soft drinks leading to fat gain). Focus on

the benefits of behaviour change also limits opportunities for weight bias and discrimination in messaging.

Remove negative associations

Continued association of certain foods and body types as inherently good or bad can encourage restrictive dieting habits, food guilt, and further stigmatise larger body types (Study 3). Hence, any moralisation of foods/food habits and promotion of certain body types over another should be avoided.

Avoid fear tactics

There is contention over whether or not fear is an efficient motivator for behaviour change. However, the studies in this Thesis demonstrate that when, in relation to food behaviours and weight status, such tactics have the potential to further increase fears of food and weight gain, particularly in vulnerable audiences, exacerbating ED symptoms (Study 3). Therefore, a shift from fear-based messaging is encouraged.

The efficacy of campaigns implementing these recommendations will indeed need to be investigated in the future, however, PHMs incorporating the above recommendations have shown some promise. Recent research has found that when compared to traditional anti-obesity messages (such as those included in this Thesis), size acceptance messages on health at all sizes resulted in reduced weight stigma and subsequent desire to engage in unhealthy weight control behaviours, as well as increased self-esteem and body satisfaction (Rathbone et al., 2021). Further research exploring alternatives to traditional PHMs is strongly recommended. Finally, as well as the above recommendations, it is suggested that those tasked with the creating public health campaigns engage in ongoing consultation with not only audience members, but relevant partners and stakeholders who can continue to advise on strategies. As a core principle of health promotion, participation is the notion of involving

those who will be impacted by health interventions in the planning, dissemination, and evaluation processes (Epp, 1986). Ongoing participation, especially from vulnerable audiences, will be crucial to the success of future efforts, and help ensure any potential harms are mitigated.

7.2.3 Implications for Health Professionals

Weight bias in the health and medical field is pervasive (Phelan et al., 2014; 2015). For example, in a sample of 4,732 medical students, 74% demonstrated implicit (covert) weight bias, and 67% explicit (overt) weight bias (Phelan et al., 2014). These statistics highlight the need for health professionals to be aware of the stigma and biases experienced by persons in larger bodies—including those projected personally—and to continually work on challenging these. The consequences of not doing so may inhibit any improvements to public health messaging as, without a shift in the narrative through to primary care, undesirable outcomes (e.g., stigmatisation of persons in larger bodies, intense fear of weight gain) may continue. This means that shifting the narrative is not just the responsibility of those working at the population implementation level, such as in government organisations and health promotion agencies, but also those on the ground level who have one-on-one interactions with individuals on a daily basis.

Further, in the introduction to this Thesis, the concepts of integrated prevention and the Health at Every Size® (HAES) approach were briefly discussed (Section 1.3). Here, these approaches are further advocated for. Integrated prevention includes a focus on shared risk factors such as restrictive dieting and bingeing behaviours, and encouragement of a holistic, as opposed to weight-focused, view on health. Recommendations for integrated prevention include: discouraging unhealthy dieting and encouraging healthy eating behaviours that can be maintained in the long-term, promoting positive body image, reducing discussions around weight where possible, and assuming overweight individuals have experienced weight-related

mistreatment (and therefore broaching this topic carefully; Neumark-Sztainer, 2009). Studies implementing an integrated approach have been found to reduce risk factors for the development of both EDs and overweight/obesity (Sánchez-Carracedo et al., 2016) and rates of obesity (Austin et al., 2005). Additionally, it is proposed that these interventions are more cost and time-efficient, and can prevent the lifelong development of both conditions (Irving & Neumark-Sztainer, 2002).

The HAES® approach is also recommended for consideration in future intervention efforts. The five main principles guiding this approach offer an opportunity to shift from solely weight focused interventions to strategies that value the goal of overall health and wellbeing (Association for Size Diversity and Health [ASDAH], n.d). These include: *weight inclusivity*–accepting that all bodies are diverse and there is no ideal body weight or shape; *health enhancement*–supporting policies for health that improve and provide equitable access to information and services and a focus on holistic health; *respectful care*–acknowledging and eliminating weight biases and stigma and being mindful of factors such as SES, race, age, and sexual orientation; *eating for wellbeing*–advocating for personalised eating strategies surrounding hunger/satiety cues and nutritional needs as opposed to weight control; and *life-enhancing movement*–promoting movement for joy rather than aesthetic benefits for all persons (including size and ability; ASDAH, n.d). Studies implementing a HAES® approach have shown promising results. A systematic review found that overall, HAES® interventions can result in positive changes to biomarkers of health such as lipid profile, insulin sensitivity, and blood pressure (Ulian et al., 2018). Additionally, unhelpful eating behaviours such as restriction and bingeing were also reduced in many studies, as well as demonstrable improvements to overall wellbeing (increased self-esteem, decreased ratings of depression; Ulian et al., 2018).

These approaches are not proposed as a *silver bullet* solution, and some have suggested certain limitations (Bombak et al., 2019a). However, they offer a starting point for shifting current practice by challenging existing strategies that have demonstrated the potential to cause harm. As such, it is recommended that education around these strategies is provided to all working within the field of health. This education and subsequent implementation of integrated and holistic practice will help address some of the challenges facing overweight and ED prevention.

7.2.4 Changing Social and Cultural Norms

Finally, the responsibility of shifting harmful weight narratives cannot solely be placed with the health system and health professionals. Instead, society's overwhelming preference for thin bodies and stigmatisation of larger bodies may also play a role (Bryant, 2013; Swami et al., 2010). In light of the findings of this Thesis, there is scope for further research to consider the intersections between public health campaigns and cultural norms, such as how biases towards larger body types and fear of weight gain may influence perceptions of campaign messages.

Recent social movements may play a role in shifting discourse and preferences surrounding weight and body shape, such as the fat acceptance movement (Bombak, 2014; 2019b; Cooper, 2021). Those who are part of the fat acceptance movement strive toward reclaiming the word from one that carries negative associations to one that is a neutral adjective (Meadows & Daníelsdóttir, 2016). Though fat activism can be traced back to the mid-twentieth century, it has gained momentum in recent years, particularly with the proliferation of social media (Afful & Ricciardelli, 2015; Webb et al., 2017). The movement aims to reclaim the word *fat* and challenge common stereotypes and assumptions made towards persons in fat bodies, and simultaneously advocate for fair and equal treatment (Bombak, 2014; 2019b). A more recent branch of this activism is *body positivity*; a

movement started by persons in marginalised bodies to challenge existing (mainly thin/Caucasian) beauty ideals and promote acceptance of all body types (Cohen et al., 2019). Further to this is *body acceptance* in which individuals aim to achieve a state of peace and satisfaction within their bodies, opposed to constantly striving to change it (Bombak et al., 2019b). Although these concepts are relatively new, early research shows they have the potential to positively impact body image (Cohen et al., 2020; Stevens & Griffiths, 2020). In conjunction with the recommended improvements to anti-obesity public health campaigns provided earlier, efforts to shift existing narratives surrounding weight and shape have the potential to reduce stigmatisation of larger bodies and subsequent undesired outcomes, such as those demonstrated by the studies in this Thesis.

7.3 Thesis Strengths and Limitations

The use of research pragmatism in approaching the overarching research question for this Thesis led to a comprehensive mixed-methodological investigation that enabled the question to be explored in-depth. Firstly, the opening study in this Thesis (Study 1; SLR) implemented a structured and repeatable approach to detailing the current landscape of evidence for this topic. This expansive overview allowed for the identification of gaps in the literature and highlighted opportunities for improving scientific enquiries into this field of research. Informed by the findings from Study 1, Study 2 was designed using clearly defined outcome measures and previously validated psychometric questionnaires that enabled the detection of vulnerable audiences. Further, the methods for the measurement of outcomes have been substantiated in previous research (Agliata & Tantleff-Dunn, 2004; Champion & Furnham, 1999; Groesz et al., 2002; Harper & Tiggemann, 2008; Knobloch-Westerwick & Crane, 2011). This enables a certain degree of confidence in analysing and interpreting the study findings as they relate to the study population and encourages future research to utilise a similarly rigorous approach. Finally, finishing with an in-depth, qualitative exploration

using the IPA approach (Study 3), we were able to build on the findings from Study 2 and offer valuable insight into how PHMs affect vulnerable audiences, which to our knowledge has not been explored before. The findings obtained in this Thesis address existing gaps in the literature on the influence of anti-obesity campaigns on risk factors for EDs and provide a solid justification for further scientific enquiry to continue exploring an issue of great complexity.

Limitations for each study have been addressed in their corresponding chapters, however, it is crucial to consider these in the overall context of this Thesis. Though the survey design implemented in Study 2 enabled for broad participant reach, the completion of the survey in a non-controlled environment limits our ability to consider any other contextual factors, as well as broader generalisability. Additionally, in utilising the same materials (4 x real-world anti-obesity PHMs) across both of the empirical research studies, the findings of this Thesis are only really generalisable to the same, or similar, stimuli and cannot be broadly applied to all PHMs. Similarly, although a mixed methods design is a strength of this Thesis, it is important to note that the qualitative element (Study 3) cannot be generalised to the wider population. Hence, findings need to be considered in the specific context in which they exist. Finally, I acknowledge my closeness to the research topic. Although a continual effort to remain impartial and not project my own experiences into this dissertation and its related findings was made, my influence as the primary researcher with lived experience of the central condition being explored cannot be ruled out entirely.

7.4 Thesis Conclusion

This Thesis dissertation has confirmed existing concerns that public health anti-obesity campaigns targeting overweight and obesity have the potential for unintended consequences in influencing and further exacerbating risk factors for EDs. Firstly, the SLR highlighted the need for further investigation into this issue, using studies designed to

precisely measure the effects of exposure to PHMs, including clearly defined ED risk factors as primary outcomes and rigorous reporting measures. Study 2, using a pre-post design, was successfully able to identify significant changes in WS, WC, and SC, and desire to engage in UWCB following exposure to real-world PHMs, at the same time as identifying susceptible audiences (those with high ED symptomology). Finally, in-depth qualitative interviews with the most vulnerable population group further reiterated the potential for campaigns to justify and confirm thoughts and behaviours pertinent to EDs, and the notion that the effects of these could be cumulative.

The purpose of this Thesis is not to discourage efforts to address overweight/obesity completely. Instead, it is hoped that these findings provide a strong rationale for reviewing and adapting current efforts, and those tasked with the creation and dissemination of campaigns consider the implications and recommendations presented. We believe that well-planned, well-designed campaigns that are sensitive to the variety of audiences to which they cater can promote healthy behaviour change without inadvertently encouraging thoughts and behaviours that are harmful to vulnerable members of that audience. If this is not considered, we face the unfortunate possibility that rates of EDs will continue to rise. Given the severe nature of these conditions, our responsibility as health professionals is to prevent this to the best of our abilities.

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Appendices

Appendix A- Framework to help assess weight-related health promotion messages (Watson, 2011)

Dimension	Healthy	⇨	⇨	Problematic
Eating and weight control practices	Healthy eating and regular eating patterns	Dieting and erratic eating behaviours	Unhealthy weight control behaviours Binge eating	Disordered eating Eating disorders: anorexia nervosa, bulimia nervosa, binge eating disorder, atypical eating disorders
	Helpful messages promote:	*Less helpful messages promote:*		
	■ *healthy and balanced eating in line with appropriate guidelines*[37,38] ■ *an appropriate balance between energy intake and activity levels (while taking into account one's stage of growth and development)*	■ *dieting (e.g., cutting out entire food groups, drastically reducing calorie intake)* ■ *calorie restriction and creating a calorie deficit (when target audience includes non-overweight)* ■ *excessive calorie restriction (for overweight target audience)*		
	■ *the value of adopting healthy behaviours for overall physical health and emotional well-being*	■ *the value of adopting healthy behaviours solely or with excessive focus on weight-related reasons*		
	■ *regular eating patterns, including eating breakfast each day*	■ *fasting* ■ *skipping meals* ■ *eating when hungry only** **hunger/satiety signals are often non-normal (impaired and unreliable) in people with eating disorders and people who have been habitually dieting/restricting food intake*		
	■ *practical and sustainable dietary practices*	■ *impractical and unsustainable dietary practices*		
	■ *a flexible approach to eating and food choices*	■ *strict and rigid dietary rules that may induce guilt if broken*		
	■ *moderation (i.e. occasional 'treats' can fit into a healthy, balanced diet)*	■ *food rules that do not emphasise moderation and balance (i.e. occasional 'treats' not allowed; must eliminate 'X' food on all occasions)*		
	■ *healthy weight control behaviours (e.g., eating recommended daily serving of fruit and vegetables, regular and moderate physical activity)*	■ *unhealthy weight control behaviours. This includes messages provide education on (including those that encourage or discourage use of**)disordered eating/extreme weight control methods e.g., skipping meals, fasting, laxative misuse, self-induced vomiting, diuretic misuse, diet pills, etc.* ***messages designed to be helpful may inadvertently be harmful to those at risk by providing education on dangerous weight loss methods*		
	■ *matter-of-fact, non-judgmental, and pragmatic*	■ *moral and rigid judgements about dietary practices (i.e. labelling foods as 'good' or*		

	information	*'bad', choices as 'right' or 'wrong', certain foods as 'junk' foods)*		
Physical activity behaviours	Moderate physical activity	**Minimal or excessive physical activity (i.e., "excessive exercise")**	**Lack of or excessive physical activity (i.e., "excessive exercise")**	**Markedly excessive physical activity (i.e., "excessive exercise")**
	Helpful messages promote:	***Less helpful messages promote:***		
	■ *regular and moderate physical activity in line with appropriate guidelines*[45] ■ *an appropriate balance between energy intake and physical activity levels (while taking into account one's stage of growth and development)*	■ *no, minimal, or excessive physical activity*		
	■ *engaging in physical activity for physical health, psychological well-being, enjoyment, social, and lifestyle reasons* ■ *engaging in physical activity that is sustainable*	■ *engaging in physical activity for the sole purpose of weight loss, weight gain prevention, or appearance improvement* ■ *engaging in physical activity as a temporary method to affect weight change*		
Body image	Body acceptance and satisfaction	**Mild body dissatisfaction**	**Moderate body dissatisfaction**	**Severe body dissatisfaction**
	Helpful messages promote:	***Less helpful messages promote:***		
	■ *choosing healthy, balanced, behaviours for optimal physical health and psychological well-being*	■ *choosing healthy, balanced behaviours for weight and appearance reasons, with insufficient overall focus on physical health and psychological well-being* ■ *responsibility for body weight and shape as solely within the control of the individual*		
	■ *a positive relationship with one's body so that there is the desire to nurture one's body through healthy eating, physical activity, and positive self-talk*	■ *body dissatisfaction as a motivator to behaviour change* ■ *excess focus on weight and BMI* ■ *messages about controlling weight and body shape* ■ *fear, dissatisfaction, preoccupation, or concern about weight and weight gain*		
	■ *respect for individuals at any weight and shape*	■ *overweight/underweight stigmatisation* ■ *making comments about others' weight or shape*		
Weight status	Normal body weight	**Mildly overweight or underweight**	**Overweight or underweight**	**Severe overweight or underweight**
	Helpful messages promote:	***Less helpful messages promote:***		
	■ *choosing healthy, balanced, behaviours for optimal health and well-being*	■ *excess focus on weight, BMI, and weight management; with insufficient focus on overall health and on behaviour targets (i.e., eating the recommended servings of fruit*		

	■ *a healthy body weight as one possible outcome of behaviour change, in the context of other possible outcomes, such as greater physical health and psychological well-being*	*and vegetables).* ■ *messages about controlling weight and body shape*
	■ *realistic views about the relationship between body weight and physical and psychological health*	■ *the assumption that a normal body weight (BMI = 20-25kg/m²) is equivalent to "good health", regardless of eating, physical activity, or other health-related behaviours.*
	■ *overweight and obesity (and eating disorders) as conditions with multiple causes*	■ *overweight and obesity (and eating disorders) as simple problems with simple solutions* ■ *overweight and obesity as entirely within the personal control of the individual* ■ *overweight/underweight stigmatisation*
	■ *respect for individuals at any weight*	■ *overweight and obesity as being associated with a lack of willpower* ■ *making comments about others' weight or shape* ■ *overweight/underweight stigmatisation*

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Appendix B- Manuscript (Study 1; Bristow et al., 2020)

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Perspectives

Perspectives

Anti-obesity public health messages and risk factors for disordered eating: a systematic review

Claire Bristow *, Capella Meurer, Janette Simmonds, and Tristan Snell

Faculty of Education, Monash University, Wellington Road Clayton, Melbourne, VIC 3800, Australia

*Corresponding author. E-mail: Claire.Bristow1@monash.edu

Summary

In response to the increasing prevalence of overweight and obesity, public health efforts to curb these conditions have been delivered in abundance. There is concern however that the messages used to target these conditions may be increasing risk factors for disordered eating. Therefore, we sought to systematically review the literature on the effects of anti-obesity public health messages on risk factors for disordered eating. Seven electronic databases were searched for articles meeting the inclusion criteria, resulting in the inclusion of 12 studies of various methodologies that measured one or more risk factors for disordered eating following exposure to public health messages. Few studies specifically and accurately measured disordered eating behaviours. Most studies found that messages were stigmatizing towards persons who are overweight/obese, and exacerbate thin ideals and drive for thinness. Interestingly, the same was not found for measures of body dissatisfaction. Messages promoting smaller meals were also thought to be potential triggers for disordered eating. Whilst the studies included in this review offered both quantitative and qualitative insights into how public health messages may have adverse effects on eating behaviours, there was a consistent lack of valid reporting measures and clear classification of outcomes overall. Hence, future research is recommended using valid reporting tools such as validated questionnaires, as well as prolonged exposure to the intervention condition to determine longer-term impact.

Key words: eating disorders, eating and feeding disorders, overweight, obesity, public health

INTRODUCTION

Public health campaigns targeting overweight and obesity have increased dramatically over the past few decades, concurrent with the rising prevalence of these conditions (Saguy and Riley, 2005; Walls et al., 2011; World Health Organisation (WHO), 2018). Typically, these campaigns involve a message, or series of messages, directed at a particular behaviour associated with obesity (e.g. excessive energy intake) along with the potential consequences of being overweight or obese (i.e. diabetes or cardiovascular disease) (World Health Organisation (WHO), 2018). These are referred to as public health messages (PHMs) and, whilst well intentioned, have attracted criticism over their lack of effectiveness as well as potential adverse effects (Watson, 2011; Salas, 2015).

Firstly, the effectiveness of weight-loss efforts is contentious, with research to suggest that weight regain is

probable (Mann et al., 2007; Blomain et al., 2013; MacLean et al., 2015; Melby et al., 2017). That is, even if weight loss is initially successful, many dieting efforts are ultimately futile (Tsai and Wadden, 2005; Tomiyama et al., 2013). Additionally, there is concern that society's major focus on weight-based outcomes is contributing to the increasing prevalence of body dissatisfaction and eating disorders seen today (Brownell and Rodin, 1994; Patton et al., 1997; Szwarc, 2003; Couch et al., 2018).

Eating disorders (EDs), including Anorexia Nervosa (AN), Bulimia Nervosa (BN), Binge Eating Disorder (BED) and Other Specified Feeding and Eating Disorders (OSFED) (American Psychiatric Association, 2013), are of serious public health concern given their increasing prevalence and major health risks, including: hypotension, cardiac abnormalities, depression, suicidal behaviour, kidney and/or heart failure and osteoporosis (Watson et al., 2010; American Psychiatric Association, 2013). Further, Australian data demonstrate that AN maintains the highest mortality rate of any psychiatric illness, with an economic cost of treatment per episode second only to cardiac bypass surgery (Watson et al., 2010).

Researchers have suggested that whilst previously treated as separate conditions, obesity and EDs are interrelated. According to the National Eating Disorders Collaboration (NEDC) (National Eating Disorders Collaboration (NEDC), 2017) and Darby et al. (Darby et al., 2009), the rates of comorbid obesity and EDs have increased more than either condition alone. There is also literature suggesting these conditions share multiple risk factors, including body dissatisfaction and unhealthy weight control/dieting practices (Irving and Neumark-Sztainer, 2002; Haines and Neumark-Sztainer, 2006; Darby et al., 2007, da Luz, 2017). Disordered eating behaviours have also been shown to contribute to the development of obesity, and vice versa (Darby et al., 2007; Puhl and Suh, 2015a; Da Luz et al., 2017). Additionally, the prevalence of obesity with comorbid BED has increased significantly since 1995 (Da Luz et al., 2017). That is, overweight and obese individuals have high rates of binge eating and have been found to engage in unhealthy weight practices (Irving and Neumark-Sztainer 2002; National Eating Disorders Collaboration (NEDC), 2010; Puhl and Suh, 2015a). Neumark-Sztainer et al. also found alarmingly high engagement in dangerous weight-control practices by overweight and obese adolescents (diet pills, laxatives, vomiting etc.; Neumark-Sztainer et al. 2002). Hence, as increasing focus ensues alongside a rising prevalence of overweight, obesity and EDs, integrated prevention is both warranted and possible to achieve (Irving and Neumark-Sztainer, 2002; Haines and Neumark Sztainer, 2006; National Eating Disorders Collaboration (NEDC), 2010, 2017; Neumark-Sztainer, 2016). For example, a randomized control trial by Wilksch et al. (Wilksch et al., 2015) found that a school-based intervention in year 7–8 students was effective in reducing both eating disorder and obesity risk factors simultaneously. Alternatively, addressing them independently may actually detract from the success of either one (National Eating Disorders Collaboration (NEDC), 2010).

Evaluations of weight-loss interventions have suggested that professionally administered programs with adequate monitoring and supervision do not further contribute to disordered eating behaviour (Butryn and Wadden, 2005; Da Luz et al., 2015). However, a comprehensive review by the NEDC found that in most cases, ED-related outcomes are not sufficiently measured or reported (NEDC, 2017). A study by Davison and Deane (Davison and Deane, 2010) that did sufficiently measure ED risk factors found that encouraging weight reduction via physical activity increased weight and body concerns. Sim et al. also reported two case studies in which eating disorders developed following adolescents' weight loss efforts (Sim et al., 2013). A similar effect has been seen in the media, with studies in female populations showing that restrained eaters tend to restrict food intake following exposure to slim models and diet products (Anschutz et al., 2008; Boyce and Kuijer, 2014). Body satisfaction has also been shown to decrease following exposure to media images (Yamamiya et al., 2005; Bessenoff, 2006), an effect that seems to be increasing following the proliferation of social media (Holland and Tiggemann, 2016).

The impact of PHMs however is less known, though there is growing concern that they may contribute to the existing stigma and bias towards persons who are overweight. Maclean et al. argue that PHMs further exacerbate weight biases experienced by persons who are overweight or obese by implying that the individual is solely responsible for their own health condition (MacLean et al., 2009). This is echoed by Guttman and Salmon (Guttman and Salmon, 2004), who warn that blaming an individual for their health condition whilst failing to acknowledge external and environmental influences is potentially unethical. Recently, an Australian public health obesity campaign which used confronting imagery about 'toxic fat' was also subject to criticism, with the authors concluding that the campaign used questionable tactics to incite disgust and fear among the public, as well as reinforcing fat stigma (Couch et al., 2018). This is of concern given public health researchers have recently deemed the use of

stigma in combatting obesity unethical (Pausé, 2017). Further, the employment of shame and guilt as motivators for change may risk the creation of both physical and emotional ill health, interfering with overall efforts to reduce the conditions they target (Becker, 1993; Puhl and Heuer, 2010).

Weight stigma has been found to increase an individual's risk of disordered eating (Puhl and Latner, 2007; Thomas et al., 2008; Puhl and Suh, 2015a), particularly BED (Carels et al., 2010; Schvey et al., 2011; Durso et al., 2012; Puhl and Suh, 2015b). Recently, O'Hara et al. found that eating disorder symptoms were positively associated with internalized weight stigma (O'Hara et al., 2016). Mensinger et al. also found significant interactions between weight stigma and disordered eating behaviours irrespective of BMI (kg/m^2) (Mensinger et al., 2016). Additionally, stigma towards people with larger bodies may reinforce the portrayal of the *thin ideal*. The thin ideal refers to the glorification of the slim body types typically celebrated by society. Some argue that this continued endorsement of the social desirability of thinness may further contribute to the mistreatment of people who are obese (Walls et al., 2011), and fuel our obsession with body weight and shape, potentially triggering the development of eating disorders (Kilbourne, 1994; Thompson and Stice, 2001). A qualitative study of persons with obesity and their perception of the thin ideal found participants express concerns that the continued portrayal of thinness in the media is 'overwhelming', dangerous and leads to unhealthy dieting, particularly among young persons (Couch et al., 2016). A lack of representation of larger bodies in the media was also believed to further reinforce this ideal (Couch et al., 2016).

Given these risks, public health campaigners must consider whether the messages they are promoting are inadvertently reaching audiences for which they are not intended, as emphasized by Guttman and Salmon (Guttman and Salmon, 2004). In this instance, PHMs targeting overweight and obesity, which are often implemented on a large-scale population level, may negatively affect persons who are already body-conscious and engaging in weight control behaviours. As unhealthy weight control behaviours often predict long-term disordered eating (Neumark-Sztainer et al., 2006), it is important to consider the ways these messages may be received, especially by vulnerable populations such as young women (Watson et al., 2010). This concern has been addressed by the NEDC which compiled a list of potential harms that may result from public health efforts to reduce obesity including overemphasis on weight/BMI as a primary measure of health and moralization of food and eating (Watson, 2011). The authors stated that 'while addressing these issues [obesity], care must be taken not to cause unintended harm, such as increasing vulnerability to onset of eating disorders or disordered eating, or exacerbation of the risk factors that may predispose to these conditions' (Watson, 2011, p.1). This is reiterated by O'Dea (2004), affirming that one of the most essential principles of obesity prevention should be, as with other health-related interventions, 'first, do no harm'.

As dieting is the single strongest risk factor for disordered eating (Watson et al., 2010; Watson, 2011) and females with severe dieting habits are 18 times more likely (moderate female dieters 5 times more likely) to develop an eating disorder (Watson, 2011), the potential consequences of current public health efforts to reduce obesity should be considered, and the perceived benefits weighed against the potential risks. Whilst the adoption of healthy eating habits needs to be considered in order to address overweight and obesity, there is clearly a fine line between healthy weight control and the development of disordered eating.

Existing literature has explored PHMs in terms of effectiveness, impact and persuasiveness by way of content analysis and narrative review (Randolph and Viswanath, 2004; Cismaru and Lavack, 2007; Dixon et al., 2015a). Additional systematic and critical reviews have also explored the influence of weight loss interventions, mass media and the thin-ideal on body dissatisfaction and disordered eating (Groesz et al., 2002; Butryn and Wadden, 2005; Lopez-Guimera et al., 2010; Carr and Peebles, 2011; Da Luz et al., 2015). However, to our knowledge, a systematic review of the influence of PHMs on risk factors for EDs has not been undertaken. Therefore, the authors aimed to systematically search and then review the existing literature on PHMs and eating-disorder-specific related outcomes.

METHODS

Search strategy

A systematic search of the literature was conducted for articles published between January 1960 and November 2018. Seven databases were searched: Cochrane, Medline, ProQuest, PsycINFO, SAGE, Scopus and Web of Science. A combination of keywords and subject headings (MeSH) were used. Keywords included but were not limited to: 'Public health' or 'health promotion' or 'public health campaign' and 'obesity' or 'overweight' or 'weight loss' and 'eating disorder*' or 'restrict*' or 'bulimi*' or 'diet*'. MeSH headings varied

across databases, including: Health promotion, mass media, social marketing, weight management, obesity, eating disorders, binge eating, body image. Grey literature was excluded to maintain study reliability. For the detailed search strategy, refer to Appendix 1.

Inclusion/exclusion criteria

Studies that specifically measured the influence of an anti-obesity public health message on risk factors for, or diagnosis of, EDs were included. Risk factors include: negative body image, poor self-esteem, weight stigma, thin internalization and/or unhealthy weight control behaviours (i.e. restricting food intake, bingeing and/or purging). Eating disorders include those specified by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5, American Psychiatric Association, 2013) including: AN, BN, BED and OSFED. Studies not involving participants were excluded (i.e. content analysis). As a review of this nature has not been performed before, the authors felt it important to include both quantitative and qualitative research designs to allow for the retrieval of as much data in this field as possible.

Additionally, it was essential for studies to specifically refer to either a real or mock-up PHM or campaign. That is, one endorsed by or similar to official government or health promotion bodies. As such, any other form of mass media including weight-loss company advertisements, magazines, TV shows, film, newspaper/media articles or image-only content were excluded. Also, studies were required to adequately measure an outcome related to known ED risk factors (such as those listed above), and so those including ratings of likeness or message preference, as well as basic reactions to messages were excluded. Studies that simply measured intentions to eat a healthy diet or choose a healthy snack were also excluded. Though some research does link healthy eating intentions to the development of disordered eating (Sim et al., 2013; Golden et al., 2016), this association was not clear in the excluded papers. Additional exclusion criteria were 'not a published study' (e.g. abstracts, conference proceedings, opinion pieces etc.) and articles not in English.

Articles were screened using the reference manager software Covidence ©. First pass screening (title and abstract) was performed by a single reviewer (CB). Full text papers (2nd pass) were screened and inclusion/exclusion determined by two reviewers (CB, CM). Any discrepancies in votes were discussed until a unanimous decision was reached. All included articles underwent data extraction, followed by quality assessment using the Mixed Methods Appraisal Tool (MMAT, Pluye et al., 2011; Table 1). This tool was used as a guide only, as some methodologies did not fit perfectly into the criteria set out by the MMAT (e.g. some methodologies fit within multiple categories so a combination of criteria were used). Studies were also graded against the National Health and Medical Research Council (NHMRC Australia) Levels of Evidence Guidelines; a comprehensive tool for assessing the strength of research studies (National Health and Medical Research Council (NHMRC), 2009; Table 1).

RESULTS

Of the 8089 studies retrieved from the initial database search, 12 studies were included in this review (Figure 1). Due to the heterogeneity of included studies, and inconsistent reporting methods, a meta-analysis could not be performed. Table 1 provides a summary of included studies and their main characteristics. Studies were published between 1989 and 2017, the majority of which involved adult participants (n 9). The remaining studies were conducted with adolescents (n 2) and family groups (n 1). Two (n 2) involved female participants only. The most common setting was online (n 5), followed by educational setting (n 4), telephone (n 1), home (n 1) and undefined (n 1). Seven (n 7) took place in the USA, four (n 4) in Australia and one (n 1) in Canada. Study designs were diverse and can be found in Table 1.

Stigma

Stigma was the most reported outcome of studies in this review (n 10), either directly (referred to as 'stigma') or indirectly (described as 'negative perceptions', 'shame' or 'disgust' etc.). Stigmatization was generally measured in terms of participants' perceptions of persons who are overweight or obese after exposure to PHMs, or the extent to which participants believed that the message stigmatized persons with overweight/obesity. Most PHMs, particularly those with graphic content, were believed to increase stigma towards persons who are overweight. Qualitatively, participants expressed:

> Most of the harm that comes to overweight people, most of what makes them feel so crappy, basically comes down to being told that they're not good enough and they're worthless. Because when you're fat you're treated like that's all you are and you're never going to amount to anything unless you can get rid of it. (Lewis et al., 2010, p.6)

> Someone's going to go into a panic I'm fat, I'm fat, I'm fat. There is enough stigma around about this now… (Thomas et al., 2014, p.5)

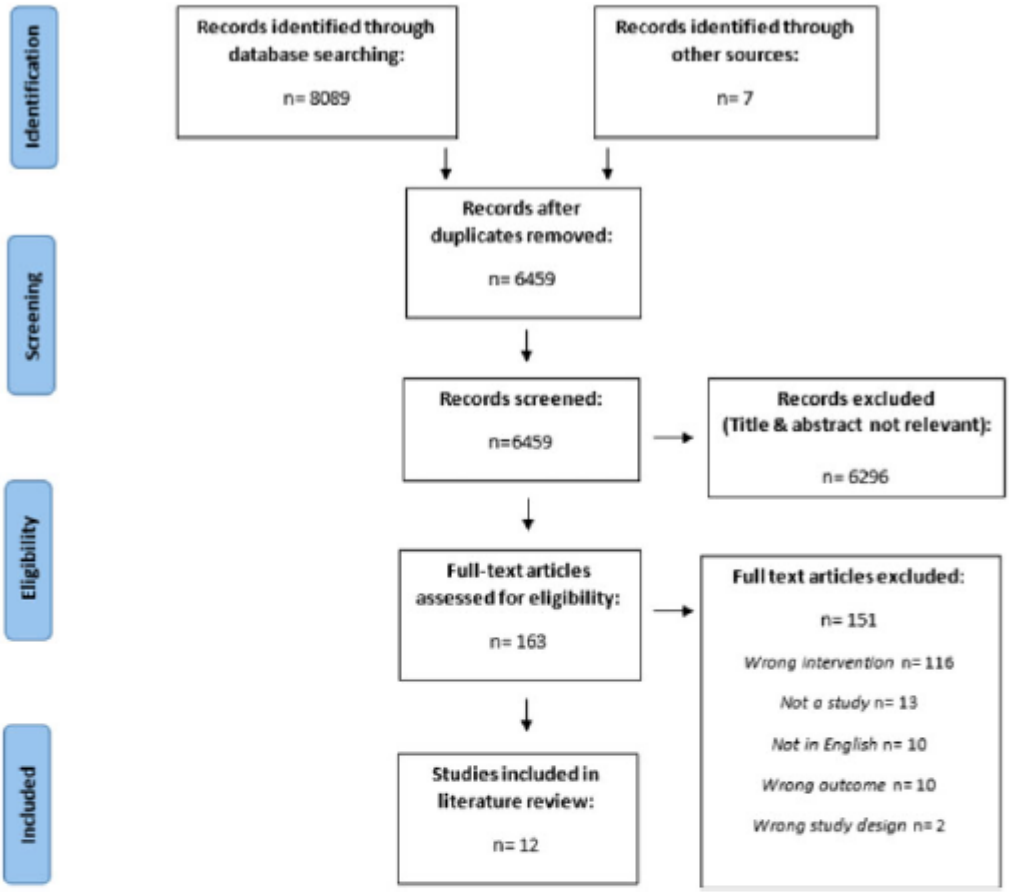

Fig. 1: PRISMA flow of included and excluded studies.

Thomas et al. (2014) also found that children believed PHMs portrayed fat as 'bad' and that people would feel 'guilty' or 'ashamed' after viewing ads.

Quantitatively, ads that were considered to be overtly graphic, and have been previously criticized by the public, received significantly higher stigma ratings than those with less confronting content (Puhl et al., 2013a, b; Dixon et al., 2015b). Ratings of stigmatization also increased when both image and text were considered stigmatizing (Young et al., 2016). Conversely, exposure to PHMs led to significantly lower stigmatizing ratings of children who are overweight and obese in one study (Barry et al., 2014), and two studies found no difference in stigma ratings following exposure (Dooley et al., 2010; Morley et al., 2016).

Weight status was found to influence stigma ratings, with participants who are overweight/obese rating PHMs as more stigmatizing (Puhl et al., 2013a; Barry et al., 2014; Dixon et al., 2015b). In one study (Young et al., 2016) normal weight participants also had stronger negative attitudes towards persons who are obese.

Body and weight dissatisfaction, self-esteem

Dissatisfaction with body weight and shape was measured and/or discussed in five studies included in this review (n 5, Shaw and Kemeny, 1989; Roehrig et al., 2008; Lewis et al., 2010; Thomas et al., 2014; Simpson et al., 2017). One study found no significant effect of PHMs on body dissatisfaction (Roehrig et al., 2008), whilst another found body dissatisfaction to decrease across time (Simpson et al., 2017). Additionally, one study measured weight satisfaction but did not provide relevant outcome data as scores were used as moderating variables only (Shaw and Kemeny, 1989).

Qualitatively, some participants reported that PHMs made them feel like 'failures' (Lewis et al., 2010). Others thought PHMs were likely to make people feel

Table 1: Summary of included studies

References	Country	Design and setting/level of evidence[a]	Participants (completors) and demographics	Intervention (IV) description	C	Main outcomes and results	Quality assessment[b]
Barry et al. (2014)	USA	RCT Online survey/II	n 1699 (n 1677) *Gender: F = 0.506, M = 0.494 Age 18–29 = 0.252, 30–44 = 0.315, 45–59 = 0.340, 60+ = 0.093 BMI category: UW = 0.011, HW = 0.291, OW = 0.264, OB = 0.434 *Only weighted values provided	VIDEOS (slightly altered from real video campaigns) 3 different IV conditions: (1) A female child talking about hypertension as a consequence of being overweight (2) A male child talking about being bullied as psychosocial consequence of being overweight (3) Female child with mothers voice-over talking about her role in child's weight problem Participants randomized to IV group 1, 2, 3 or control	Y	Ratings of obese children as lazy vs. motivated and stupid vs. smart (stigma-7-point Likert scale) Feelings towards obese children (reported on VAS—feelings ranging from 'cold' to 'warm') Exposure to IV led to LESS stigmatizing ratings compared to control ($p \leq 0.05$) and higher ratings of warmth towards obese children ($p \leq 0.01$) Obese participants and women gave significantly more favourable ratings ($p \leq 0.05$)	****
Dixon et al. (2015)	AUSTRALIA	Randomized experiment Online survey form/III-3	n 1116 Gender: F = 50% BMI category: HW = 49%, OW/OB= 51% Age: 21–29 = 49%	TV ADS (from real campaigns) Categorized as: (1) Health consequences (2) Supportive/ encouraging (3) Social norms/acceptability Execution style: (1) Graphic (pictures i.e. diseased organ) (2) Simulation/animation (3) Positive testimonial (personal narrative) (4) Negative testimonial (personal narrative) (5) Depicted scene (by actors) Participants randomized to view 4/8 messages	N	Stigma (referred to as 'negative emotions') measured by feelings of disgust, shame, anxiety, fear, guilt and sadness (measured on 7-point Likert scale) 'Toxic Fat' ad (graphic) resulted in significantly stronger negative emotions than other ad types (n p-value given) OW and OB participants had significantly higher negative impact associations for 'Toxic Fat', 'Measure Up' (health consequence) and 'Piece of String' (health consequence) ads ($p \leq 0.001$, <0.01 and <0.01, respectively)	***

(continued)

Table 1: (Continued)

References	Country	Design and setting/level of evidence[a]	Participants (completors) and demographics	Intervention (IV) description	C	Main outcomes and results	Quality assessment[b]
Dooley et al. (2010)	CANADA	Randomized pre-post experiment Community groups/II	n 95 Gender: F = n 50, M = n 45	PRINT ADS (from real campaigns) Categorized as: (1) Body image- 'take a small step to get healthy' with image of female body (2) Health benefit- 'used regularly, it can help fight cancer' with image of soccer ball (3) Positive experience- 'fruits and vegetables take the best of us' with images of fruits and vegetables Participants randomized to IV group 1, 2, 3 or control	Y	State self-esteem (measured using SSES*) and weight attitudes (including stigma-measured using AAWAD*) NS effect of IV conditions on weight attitudes NS effect of IV conditions on self-esteem	***
Lewis et al. (2010)	AUSTRALIA	Qualitative interviews Telephone/ N/A	n 142 Gender: F = n 106, M = n 36 Age: Mean = 44.8 (19–75 year olds) BMI category: 30–39.99 (kg/m^2) = n 88 (62%), ≥ 40 (kg/m^2) n = 54 (38%)	Interview questions (1) What do you think about the range of public health messages that are currently around about obesity? What do you think is the key message they are giving? (2) Do you think the messages in these campaigns apply to you? How so? What about the general population? (3) Do these types of messages impact on your feelings about your weight? Why? (4) Do you think public health messages about obesity need to be changed? Why?	N	Qualitative responses to interview questions (See in text for quotes) Many felt focus on health consequences of being fat amplified guilt, blame and shame Many reported campaigns do not motivate them to lose weight but rather make them feel like failures Majority agreed messages need to shift from weight and BMI focus to overall health and be less stigmatizing to obese individuals Most women spoke about impact of societal reactions including messages about obesity on their emotional wellbeing	***

(continued)

Table 1: (Continued)

References	Country	Design and setting/level of evidence[a]	Participants (completors) and demographics	Intervention (IV) description	C	Main outcomes and results	Quality assessment[b]
Morley et al. (2016)	AUSTRALIA	Pre-post campaign evaluation Survey form/IV	Pre-exposure n 2012 (IV n 1003, C n 1009) Follow-up wave 1 n 2005 (IV n 1002, C n 1003), Follow up wave 2 n 2009 (IV 1001, C 1008) Gender: Baseline: IV F = 54.9% C F = 54.7%, Wave 1: IV F= 55.2%, C F= 55.1% Wave 2: IV F = 55.0%, C F = 55.4% Age: Baseline: IV 35–44= 40.4%, C 35–44= 38.9% Wave 1: IV 35–44= 41.1%, C 35–44= 40.6% Wave 2: IV 35–44= 38.1%, C 35–44= 36.3% BMI category: Baseline: IV HW = 41.8%, C HW = 43.1% Wave 1: IV HW = 45.7%, C HW = 44.1%, Wave 2: IV HW = 44.8%, C HW = 44.3	VIDEO AND PRINTS ADS (from real campaigns) Principal ad (1): Graphically depicts visceral ('Toxic Fat') around overweight person's organs Supporting ads (4): Reminders of the visceral images with 'how' change messages such as small achievable diet/PA changes IV state (Western Australia) compared to control state (Victoria)	Y	Thoughts about weight and health, perceived urgency to lose weight (measured on 10-point Likert scale) and overweight stereotypes (stigma - composite scale measured whether participants agreed or disagreed with stereotypes) Overweight stereotypes and weight attitudes did not differ significantly between pre- and post- exposure	****

(continued)

Table 1: (Continued)

References	Country	Design and setting/level of evidence[a]	Participants (completors) and demographics	Intervention (IV) description	C	Main outcomes and results	Quality assessment[b]
			*Age categories included: 25–34, 35–44, 45–49, BMI categories included: UW, HW, OW, OB				
Puhl et al. (2013a)	USA	RCT Online survey form/II	1085 Gender: F= n 536 M= n 533 Age: mean 45.7 BMI category: HW = n 381 (37.6%), OW = n 319 (31.5%), OB = n 312 (30.8%)	PRINT ADS (from real campaigns) 10 publicly criticized obesity-related health campaigns Example of messages: (1) Don't Drink Yourself Fat- A person's hand pours body fat from soft drink bottle, text reads 'are you pouring on the pounds? Don't drink yourself fat. Cut back on soda and other sugary beverages. Go with water. . .' Participants randomized to IV condition or control (10 neutral ads)	Y	Stigma (measured on a 5-point Likert scale) including questions regarding whether ads promote negative stereotypes, increase blame, stigmatize overweight/obese persons, increase dislike towards overweight/obese persons, are disrespectful or insulting IV ads rated as significantly more stigmatizing than control ($p \leq 0.001$)	****
Puhl et al. (2013b)	USA	Randomized experiment Online Survey form/ III-3	n 1014 Gender: F = n 500 (50.2%), M = n 497 (49.8%) Age: mean 46.1 BMI categories: UW = n 36 (3.6%), HW = n 367 (36.5%), OW = n 336 (33.4%), OB = n 266 (26.5%)	PRINT ADS (from real campaigns) 30 messages in total, targeting topics such as; sugar sweetened beverages, portion sizes, fruits and vegetables, PA, personal empowerment, parents and stigma. Statements were those such as 'cut down on sugary drinks', 'skip seconds. . .lose your gut', 'the more you gain, the more you have to lose', 'childhood obesity is child abuse' etc.	N	Stigmatization of obese persons (measured on a 5-point Likert scale) 'Childhood obesity is child abuse', 'being fat takes the fun out of being a kid' and 'fat kids become fat adults' rated as the most stigmatizing messages ($p \leq 0.05$) 'You have the strength to take control of your health', Fat kids become fat adults' and 'The temptation to eat unhealthy food is hard to fight, but it's a fight that	***

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Table 1: (Continued)

References	Country	Design and setting/level of evidence[a]	Participants (completors) and demographics	Intervention (IV) description	C	Main outcomes and results	Quality assessment[b]
				Participants randomly allocated to view 10 messages only		you and your community can win' were considered significantly more stigmatizing by OB but not OW participants (*p*-value not provided)	
Roehrig et al. (2007)	USA	Randomized pre-post experiment Classroom/II	n 139 (n 123) (Pro-dieting n 46, anti-dieting n 37, control n 40) Female undergraduate students aged between 18 and 30 BMI categories: UW = 6.5%, HW = 61.9%, OW = 15.1%, OB = 16.5%	MOCK UP MESSAGES (based on health information from relevant agencies) (1) Pro-dieting message- 'Lose weight/maintain low body weight' headline (obesity prevention) (2) Anti-dieting message- 'Stop dieting, accept body weight' message headline (ED prevention) Participants were tested at baseline, post-test and 2 week follow up	Y	Body dissatisfaction (measured using EDI-BD* and VAS), thin-ideal internalization (measured using SATAQ-3*), sociocultural pressure for thinness (measured using SATAQ-3*), drive for thinness (measured using EDI-DT*), dieting restraint (measured using DEBQ-RS*), negative affect (measured using PANAS-X*), bulimic symptoms (measured using EDE-Q*) and eating disorder screening (EDI-3*) Between groups: Perceived pressure to diet greater in pro-diet condition vs ED prevention and control ($p \leq 0.0001$) Dieting intentions greater in pro-diet condition vs. ED prevention and control ($p \leq 0.0001$) Thin internalization greater in pro-diet condition vs ED prevention and control ($p \leq 0.0001$) Bulimic intentions lesser in anti-diet vs pro-diet and control ($p \leq 0.05$) NS difference in body dissatisfaction Pre-post: Perceived pressure to diet decreased in anti-diet and control condition ($p \leq 0.001$)	***

(continued)

Table 1: (Continued)

References	Country	Design and setting/level of evidence[a]	Participants (completors) and demographics	Intervention (IV) description	C	Main outcomes and results	Quality assessment[b]
Shaw and Kemeny (1989)	USA	Mixed methods *Part A*= Quantitative survey/IV *Part B*= Qualitative focus groups/N/A	n 627 Female high school students Grade 10 = n 247 (39%) Grade 11 = n 230 (37%) Grade 12 = n 150 (24%)	MOCK UP POSTERS (displayed in video sequences) (1) 'Slim' message: Fitness Today: For a Slimmer Tomorrow (2) 'Health' message: Fitness Today: For a Healthier Tomorrow (3) 'Active' message: Fitness Today: For a More Active Tomorrow Three different models appeared alongside text (below average weight, average weight and above average weight) Overall 18 posters: 3 × messages, 3 × models, 2 × poses—participants viewed all posters	N	Quantitative: Desired weight and satisfaction with weight, self-esteem (measured using Rosenberg SES*) Qualitative: 'Discuss how girls would react to the poster' Quantitative: Scores not provided- were implemented as variable factors not outcomes (See in text for quotes) Girls reported the most important reason for fitness was to lose weight or keep slim, and slimness was considered more important than fitness Majority believed emphasis on thinness was discouraging, and would make girls self-conscious, and emphasized the thin ideal	**
Simpson et al. (2017)	USA	RCT with pre-post measures/II	Phase 1 (baseline) = n 859 Phase 2 (post) = n 733 Phase 3 (follow up) = n 693 (n 434) Gender: F = n 316 (72.8%) M = n 118 (27.2%) Age: mean 19.46 BMI:	VIDEOS (from real campaigns) 5 weight-centric obesity related public health campaigns Participants randomized to IV or control (5 non-weight centric videos)	Y	Body dissatisfaction and shape concern (measured using EDE-Q*), influence of societal influences on body image, appearance standards and eating behaviours (measured using SATAQ-3*), message stigmatization (measuring on a 5-point Likert scale) Body dissatisfaction and shape concern scores LOWER at post & follow-up regardless of condition ($p \leq 0.001$)	****

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Table 1: (Continued)

References	Country	Design and setting/level of evidence[a]	Participants (completors) and demographics	Intervention (IV) description	C	Main outcomes and results	Quality assessment[b]
			mean 24.19 (ranged from 16.43–48.73) (kg/m^2)			Thin internalization increased regardless of condition ($p \leq 0.001$) IV resulted in greater negative evaluations and self-efficacy ($p \leq 0.001$) No result provided for stigma ratings	
Thomas et al. (2014)	AUSTRALIA	Qualitative interviews/N/A	150 family groups (comprised of 159 parents and 184 children) Parents: Gender: F = 82%, M = 18% Age: mean 44.7 BMI: mean 28.4 (range 18.6–57.2) Children: Gender: Equal boys and girls (n not supplied) Age: mean 13.5 BMI: mean 20.0 (range 14.2–37.1) (kg/m^2)	TV ADS (from real campaigns) 'Measure Up'—involves a video of a person's expanding waistline and a tape measure motioning more danger as the waist circumference get larger 'Swap It'- an animated video that discusses healthy behavioural swaps	N	Perceptions, reactions and interpretations of primary and secondary messages within campaigns, i.e. 'What do you think is the main message in that advertisement?' and 'Did you dislike anything about those messages?'(Check in text for quotes) Many parent participants (authors state between 25-50%) believed the Measure Up campaign stigmatized individuals who were obese Younger children also noted strong moral messages and that fatness is 'bad' and weight loss is 'good' and 'healthy' Many children had a strong negative reaction calling the campaign 'scary', 'sad', 'negative', 'depressing' or 'defeatist' Some older children said the advertisement would make overweight or obese people feel 'guilty', 'ashamed', 'self-conscious' and 'bad' Older children, particularly girls, said that encouraging swapping 'big for small' (meals) could be problematic for persons at risk of engaging in dieting and eating disorders	***

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Table 1: (Continued)

References	Country	Design and setting/level of evidence[a]	Participants (completors) and demographics	Intervention (IV) description	C	Main outcomes and results	Quality assessment[b]
Young et al. (2016)	USA	2 × 2 between participants experiment Online/III-3	n 188 (n 161) Gender: F = n 86 (52%) M = n 75 (48%) Age: mean 31.1 BMI categories: <25 (kg/m^2) = n 78 (48.4%), 25–30 (kg/m^2) = n 41 (25.5%), ≥30 (kg/m^2) = n 42 (26.1%)	MOCK UP ADS (PRINT) (1) Stigmatizing image and individual behaviour text (2) Stigmatizing image and social determinants text (3) Fast food image and behaviour text (4) Fast food image and social determinants text Behaviour text: 'Bad choices, bad health. People have no self control when it comes to junk food…(cont.)' Social determinants text: 'Unhealthy environments. In some neighbourhoods, fast food chains and convenience stores are the only place to buy food…(cont.)' Participants randomly assigned to one of four messages	N	Attitude towards obesity (stigma- measured using AAS*) Attitudes to obese persons did not differ for IMAGES between IV type (stigmatizing vs. non-stigmatizing) However, when text AND image considered together, there was a significant difference ($p = 0.03$) 'Normal weight' participants had more negative attitudes towards obese persons than OW or OB persons ($p = 0.005$)	***

[a]According to NHMRC Additional Levels of Evidence and Grades for Recommendations for Developers of Guidelines (qualitative studies are not included in these guidelines; NHMRC, 2009).

[b]Guided by the MMAT criteria (Pluye et al., 2011); ****100% criteria met, ***75% criteria met, **50% criteria met, *25% criteria met.

C, control; F, female; M, male, UW~, underweight; HW~, healthy weight; OW~, overweight; OB~, obese (~according to BMI criteria kg/m^2); IV, intervention; PA, physical activity; Y, yes; N, no; NS, non-significant. AAS, Antifat Attitudes Scale (Lewis et al., 1997); AAWAD, Attitudes About Weight and Dieting (Crandall, 1994); DEBQ-RS, Dutch Eating Behaviour Questionnaire- Restraint Scale (Van Strien et al., 1986); EDE-Q, Eating Disorder Examination Questionnaire (Fairburn and Beglin, 1994); EDI-3, Eating Disorder Inventory 3 (Garner, 2004); EDI-BD, Eating Disorder Inventory- Body Dissatisfaction (Garner et al., 1983); EDI-DT, Eating Disorder Inventory- Drive for Thinness (Garner et al., 1983); PANAS-X, Positive And Negative Affect Scale X (Watson and Clark, 1992); SATAQ-3, Sociocultural Attitudes Towards Appearance Scale 3 (Thompson et al., 2004); SSES, State Self-Esteem Scale (Heatherton and Polivy, 1991); SES, Self-Esteem Scale (Rosenberg, 2015); VAS, Visual Analogue Scale.

self-conscious and 'bad' about themselves and their bodies (Thomas et al., 2014).

> .. I think that insisting that being thin is healthy is doing more harm than good…Those horrible 'Reduce Your Waist, Reduce Your Risk' ads and stuff need to go away, … scare tactics can be more damaging than any good (Lewis et al., 2010, p.5)

> When you advertise fitness to make you look good, it makes us all think there is something wrong with the way we look (Shaw and Kemeny, 1989, p.684)

No significant effect was found for self-esteem scores in one study (Dooley et al., 2010), whilst self-esteem was only used as a moderating variable in another (Shaw and Kemeny, 1989), thus no data on the effect of the intervention on this outcome is reported.

Drive for thinness and thin internalization

Thin internalization was explored qualitatively in one study (Shaw and Kemeny, 1989). Girls expressed that a 'slimming' poster suggested that the most important reason for fitness was to keep slim. The majority believed that this emphasis on thinness was discouraging and would make girls self-conscious, and that it emphasized the thin-ideal.

> Yes, it would encourage girls because the girl in the poster is small and slim so it would encourage many young girls who have a weight problem to be this size. We feel that it would encourage many girls to join in physical fitness activities because it would make them want to lose weight more. (Shaw and Kemeny, 1989, p.683–684)

> We don't think this type of poster should be promoting fitness. The girl on it has a really nice skinny body but then the message, Fitness Today: For a Slimmer Tomorrow, makes you think that's all fitness should be, getting slim. Many girls would look at this poster and think, if I go to a fitness class I will look just like the model. (Shaw and Kemeny, 1989, p.684)

Quantitatively, two studies measured thin internalization (Roehrig et al., 2008; Simpson et al., 2017), with Roehrig et al. (Roehrig et al., 2008) also measuring drive for thinness and dieting restraint. Thin internalization was significantly greater after exposure to intervention in both studies. Pressure to diet was significantly greater in those exposed to the pro-diet intervention, which ultimately led to higher dieting and weight-control intentions (Roehrig et al., 2008).

Eating disorder behaviour

Whilst numerous studies measured important aspects and/or risk factors for EDs such as thin internalization, body dissatisfaction, self-esteem etc. (see above), only one study measured a specific disordered behaviour, in this instance bulimia (Roehrig et al., 2008). In this study, intentions to engage in bulimic behaviours were lower in the anti-diet condition compared to the pro-dieting and control conditions.

Quantitatively, Thomas et al. (2014) reported that older children, particularly girls, thought that PHMs that encouraged swapping bigger meals for smaller meals could be problematic for persons at risk of engaging in dieting and EDs. No other studies reported specifically on eating disorders.

DISCUSSION

This review sought to explore the influence of anti-obesity PHMs on risk factors for disordered eating, as a review of this kind was missing from the literature. Our findings add to previous concerns that public efforts to curb obesity may be exacerbating risk factors for disordered eating (Guttman and Salmon, 2004; MacLean et al. 2009; Davison and Deane, 2010; Sim et al., 2013; Pausé, 2017; Couch et al. 2018).

One of the most notable findings in this review is that when analysing the literature, it is evident that there is a distinct absence of investigation into this topic. That is, the effect of PHMs on risk factors for disordered eating has rarely been directly or thoroughly measured, and often is discussed only briefly by the authors.

The present review also demonstrates a clear lack of direct measurements for ED outcomes, with only one study providing such a measure (Roehrig et al., 2008). This is consistent with views expressed in a comprehensive review by the NEDC (2017) which concluded that there is a considerable lack of reporting and use of valid measurement tools when evaluating the risk of ED development during or after weight-loss interventions. A lack of validated measures was also notable in the present review, with many studies using basic Likert scales to measure outcomes. Inconsistencies were also present in the reporting of outcome measures, and measures were often not clearly defined. These inconsistencies were in part due to the lack of validated scales used. Such a lack presented difficulties when assigning data to particular outcomes, such as classifying 'weight attitudes' or 'shame' and 'disgust'. With authors often not reporting on each individual measure (i.e. 'weight attitudes' as a whole and not in subcategories), the interpretation of results was more difficult, compared to when

specific scale data was provided. It is therefore clear that more investigation into this topic is required.

When considering past research on the negative influence of the media, both traditional and social (Groesz et al., 2002; Holland and Tiggemann, 2016), there are consistencies between these findings and those of the present review. That is, exposure to both mass media and anti-obesity PHMs can have adverse effects on audiences, in particular exacerbating thin internalization and promoting the thin-ideal (Bessenoff, 2006; Harper and Tiggemann, 2008). This is of concern given that greater levels of thin idealization are associated with greater risk of developing an ED (Thompson and Stice, 2001; Stice, 2002). Interestingly however, in the two studies measuring body dissatisfaction in this review, one found no change after exposure to PHMs, and one reported a decrease across time. Whilst this contrasts with findings from the aforementioned literature, a previous study has demonstrated similar results to those of this review, finding that exposure to different types of body shapes in the media (thin, neutral, etc.) had no influence on body dissatisfaction in adolescent girls (Champion and Furnham, 1999). It is possible that whilst short-term exposure is enough to incite the thin ideal, body dissatisfaction may be a more progressive outcome that is established over time (Bucchianeri et al., 2013). It is also possible that slim beauty standards are so pervasive in society that exposure is unlikely to have any further impact on an individual's level of body satisfaction. Additionally, whilst body dissatisfaction and desire to lose weight were considered by some studies in this review, most did not directly measure participants' concern for their own weight following exposure to PHMs. This would have been beneficial given weight concern is widely considered a strong contributor to the development of EDs (Gowers and Shore, 2001).

Considering stigma, anti-obesity PHMs were in most cases thought to be largely stigmatizing. This is consistent with previous theories (Guttman and Salmon, 2004; MacLean et al., 2009) and concerns that such public health efforts only increase health disparities for persons who are overweight/obese (Puhl and Heuer, 2010; Puhl and Suh, 2015b). An exception in this review was the study by Barry et al. (Barry et al., 2014) in which positive feelings towards children with obesity actually increased following messages about bullying and psychosocial consequences of being overweight. This could be due to the emotive nature of these messages, which were delivered mostly by children, resulting in feelings of empathy from participants. Interestingly, two studies also reported a non-significant difference between intervention and control conditions (Dooley et al., 2010) or before and after exposure to stigmatizing content (Morley et al., 2016). Qualitatively however, there were very emotive expressions about stigma from participants, using words such as 'worthless' when explaining how stigma contributes to the portrayal of persons who are overweight/obese. With considerable evidence to suggest that implicit, explicit and internalized weight bias has severe psychosocial effects and enhanced risk of ED development (Carels et al., 2010; Durso et al., 2012; O'Hara et al., 2016), these findings highlight the need for development of less stigmatizing messaging in public health efforts.

The use of mixed methodologies in this review provided a comprehensive insight into how PHMs are received, with notable agreements and discrepancies between quantitative and qualitative data. Whilst stigma and thin internalization were consistent in both quantitative and qualitative data, negative effects of PHMs on self-esteem and body dissatisfaction appeared to be greater in the qualitative descriptions but not quantitative ratings. Research into the most effective methodologies to use when investigating disordered eating related behaviours offers varying perspectives (Black and Wilson, 1996; Grilo et al., 2001). Early literature suggests that interviews may be more valid than self-report forms, as without the help of an interviewer, participants' may find it difficult to determine their level of engagement in ED related behaviours (i.e. what level in food intake constitutes binge eating etc.) (Cooper and Fairburn, 1987). However, others have argued participants may be too embarrassed to admit to certain behaviours (such as bingeing or purging) in person, and would be more likely to report these behaviours anonymously via a self-report form (Fairburn and Beglin, 1994). A comparison of these methods was performed by Fairburn and Beglin (Fairburn and Beglin, 1994) who found high agreement between methodologies in outcomes such as dietary restraint, weight and shape concern, but considerable disagreement in binge eating, where higher rates were reported via self-report questionnaire. Hence, it is evident there is validity in both methods, depending on varying factors such as outcomes to be measured, resources, budget etc.

Considering the data included in the present review, those responsible for the creation and dissemination of public health materials addressing obesity need to be cognizant of the potential for such messages to generate negative consequences, especially for persons who are overweight or obese and hence more likely to be sensitive to the stigma attached to PHMs. Whilst this review was limited by a lack of clear and consistent reporting measures, this highlights a lack of enquiry into the issue

at hand, with the available evidence provided in this review justifying further investigation. Future research is recommended using validated reporting measures on specific risk factors and diagnosable outcomes of EDs to enable a deeper understanding of how these conditions may be affected by such obesity prevention efforts. For example, validated questionnaires such as the Eating Disorder Examination Questionnaire, which measures varying disordered eating behaviours such as bingeing, purging and starvation (EDE-Q, Fairburn and Beglin, 1994) and/or the Sociocultural Attitudes Towards Appearance Scale, which measures the extent to which a person internalizes the thin-ideal from varying different sources (SATAQ-4, Schaefer et al., 2015) would be of value. Additionally, exposing participants to PHMs for longer periods of time may offer further valuable insight on longer-term impact.

Finally, it is suggested that future PHMs and anti-obesity campaigns avoid imagery and language centring on weight and weight loss, and instead focus on the non-aesthetic benefits of maintaining a healthy weight. It is also recommended that these efforts take an empathetic, rather than blame approach, in order to acknowledge the external influences on one's health, as opposed to the 'lazy' and 'undisciplined' narrative so often implied. Messages that continue to reinforce the narrative of overweight and obesity as 'gross' and the sole fault of the individual only serve to exacerbate the stigma and bias experienced by these members of the population, and continue to portray fatness as something that must be avoided at all costs. Hence, continued effort to shift this focus to an integrated, overall health and wellbeing approach, may help lessen the risk of these messages negatively impacting the individuals who are exposed to them, particularly those most at risk of disordered eating behaviours.

Limitations

Despite the authors' extensive efforts, including systematic searching of databases and manual searching of literature reference lists, it is possible that studies meeting the inclusion criteria may have been missed. Further, only one author performed title and abstract screening despite full-text screening being completed by two authors. Additionally, although a strict inclusion/exclusion criteria was established, the aim of some studies included in this review was not explicitly to measure the influence of PHMs on EDs, hence some outcome data were not provided in detail, limiting the conclusions able to drawn in these instances. This review was also limited by the heterogeneity of the included studies, whereby reporting measures and outcomes were often not consistent.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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Appendix C- Detailed Search Strategy for Systematic Literature Review (Study 1)

((public OR health) near/2 (campaign* OR message* OR promotion OR strateg* OR advertis* OR information OR communicat* OR education OR program*)) OR "mass media" OR "social marketing"	*AND*	overweight OR over weight OR obes* OR diet* OR "weight control*" OR "weight loss" OR "weight manage*" OR "weight reduc*"	*AND*	((eating near/1 disorder*) OR (eating near/1 behavio?r) OR (eating near/1 maladaptive) OR anorexi* OR binge* OR bulimi* OR purge* OR purging OR "compensat* behavio?r*" OR "body image" OR (restrict* near/1 diet*) OR (restrict* near/1 eat*) OR (restrict* near/1 calorie*) OR (restrict* near/1 food) OR (restrict* near/1 energy) OR (restrict* near/1 intake) OR (restrict* near/1 kilojoule*) OR (restrict* near/1 consum*))

MeSH Headings: Health promotion, Health education, Health planning, Mass media, Social marketing, Obesity, Obesity management, Weight management, Overweight, Weight gain, Weight loss, Eating disorders, Feeding and eating disorders, Anorexia nervosa, Binge eating, Bulimia nervosa, Body image, Social stigma, Attitude to health

Appendix D- Mixed Methods Appraisal Tool (MMAT; Pluye et al., 2011)

PART I. MMAT criteria & one-page template (to be included in appraisal forms)

Types of mixed methods study components or primary studies	Methodological quality criteria (see tutorial for definitions and examples)	Responses			
		Yes	No	Can't tell	Comments
Screening questions (for all types)	• Are there clear qualitative and quantitative research questions (or objectives*), or a clear mixed methods question (or objective*)?				
	• Do the collected data allow address the research question (objective)? E.g., consider whether the follow-up period is long enough for the outcome to occur (for longitudinal studies or study components).				
	Further appraisal may be not feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.				
1. Qualitative	1.1. Are the sources of qualitative data (archives, documents, informants, observations) relevant to address the research question (objective)?				
	1.2. Is the process for analyzing qualitative data relevant to address the research question (objective)?				
	1.3. Is appropriate consideration given to how findings relate to the context, e.g., the setting, in which the data were collected?				
	1.4. Is appropriate consideration given to how findings relate to researchers' influence, e.g., through their interactions with participants?				
2. Quantitative randomized controlled (trials)	2.1. Is there a clear description of the randomization (or an appropriate sequence generation)?				
	2.2. Is there a clear description of the allocation concealment (or blinding when applicable)?				
	2.3. Are there complete outcome data (80% or above)?				
	2.4. Is there low withdrawal/drop-out (below 20%)?				
3. Quantitative non-randomized	3.1. Are participants (organizations) recruited in a way that minimizes selection bias?				
	3.2. Are measurements appropriate (clear origin, or validity known, or standard instrument; and absence of contamination between groups when appropriate) regarding the exposure/intervention and outcomes?				
	3.3. In the groups being compared (exposed vs. non-exposed; with intervention vs. without; cases vs. controls), are the participants comparable, or do researchers take into account (control for) the difference between these groups?				
	3.4. Are there complete outcome data (80% or above), and, when applicable, an acceptable response rate (60% or above), or an acceptable follow-up rate for cohort studies (depending on the duration of follow-up)?				
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the quantitative research question (quantitative aspect of the mixed methods question)?				
	4.2. Is the sample representative of the population understudy?				
	4.3. Are measurements appropriate (clear origin, or validity known, or standard instrument)?				
	4.4. Is there an acceptable response rate (60% or above)?				
5. Mixed methods	5.1. Is the mixed methods research design relevant to address the qualitative and quantitative research questions (or objectives), or the qualitative and quantitative aspects of the mixed methods question (or objective)?				
	5.2. Is the integration of qualitative and quantitative data (or results*) relevant to address the research question (objective)?				
	5.3. Is appropriate consideration given to the limitations associated with this integration, e.g., the divergence of qualitative and quantitative data (or results*) in a triangulation design?				
	Criteria for the qualitative component (1.1 to 1.4), and appropriate criteria for the quantitative component (2.1 to 2.4, or 3.1 to 3.4, or 4.1 to 4.4), must be also applied.				

*These two items are not considered as double-barreled items since in mixed methods research, (1) there may be research questions (quantitative research) or research objectives (qualitative research), and (2) data may be integrated, and/or qualitative findings and quantitative results can be integrated.

Appendix E- NHMRC Evidence Hierarchy (NHMRC, 2009)

Table 1 NHMRC Evidence Hierarchy: designations of 'levels of evidence' according to type of research question (including explanatory notes)

Level	Intervention [1]	Diagnostic accuracy [2]	Prognosis	Aetiology [3]	Screening Intervention
I [4]	A systematic review of level II studies	A systematic review of level II studies	A systematic review of level II studies	A systematic review of level II studies	A systematic review of level II studies
II	A randomised controlled trial	A study of test accuracy with: an independent, blinded comparison with a valid reference standard,[5] among consecutive persons with a defined clinical presentation[6]	A prospective cohort study[7]	A prospective cohort study	A randomised controlled trial
III-1	A pseudorandomised controlled trial (i.e. alternate allocation or some other method)	A study of test accuracy with: an independent, blinded comparison with a valid reference standard,[5] among non-consecutive persons with a defined clinical presentation[6]	All or none[8]	All or none[8]	A pseudorandomised controlled trial (i.e. alternate allocation or some other method)
III-2	A comparative study with concurrent controls: ▪ Non-randomised, experimental trial[9] ▪ Cohort study ▪ Case-control study ▪ Interrupted time series with a control group	A comparison with reference standard that does not meet the criteria required for Level II and III-1 evidence	Analysis of prognostic factors amongst persons in a single arm of a randomised controlled trial	A retrospective cohort study	A comparative study with concurrent controls: ▪ Non-randomised, experimental trial ▪ Cohort study ▪ Case-control study
III-3	A comparative study without concurrent controls: ▪ Historical control study ▪ Two or more single arm study[10] ▪ Interrupted time series without a parallel control group	Diagnostic case-control study[5]	A retrospective cohort study	A case-control study	A comparative study without concurrent controls: ▪ Historical control study ▪ Two or more single arm study
IV	Case series with either post-test or pre-test/post-test outcomes	Study of diagnostic yield (no reference standard)[11]	Case series, or cohort study of persons at different stages of disease	A cross-sectional study or case series	Case series

Appendix F- Quality Assessment and Level of Evidence Figure (Study 1)

	LEVEL OF EVIDENCE^	QUALITY ASSESSMENT RATING*
Barry et al. 2014	II	****
Dixon et al. 2015	III-3	***
Dooley, Deshpande & Adair 2010	II	***
Lewis et al. 2010	N/A^	***
Morley et al. 2016	IV	****
Puhl, Luedicke & Peterson 2013	II	****
Puhl, Peterson & Luedicke 2013	III-3	***
Roehrig, Thompson & Cafri 2007	II	***
Shaw & Kemeny 1989	Part A= IV	**
Simpson, Griffin & Mazzeo 2017	II	****
Thomas et al. 2014	N/A^	***
Young, Subramanian & Hinnat 2016	III-3	***

^ According to NHMRC Additional Levels of Evidence and Grades for Recommendations for Developers of Guidelines (NHMRC, 2009) – qualitative studies are not included in this guidelines

* Guided by the MMAT criteria- used as a guide only (Pluye et al., 2011)

Appendix G- Quantitative Qualtrics Survey (Study 2)

Introduction

Thank you for your interest in this research project. Before you begin the survey, there are a few important things for you to know.

What does the research involve?

This research aims to explore participants' response to real-world public health advertisements in the context of body image and eating behaviours. A series of questions are provided in response to exposure to images of real-world advertisements. Some personal information such as age, height and weight will also be asked.

Why were you chosen for this research project?

You were chosen for this research project because you are a member of the general public who expressed interest in participating from one of our advertising campaigns. You are suited for this research project as long as you are aged 15 years or over.

Ethics, consent & confidentiality

This research has gained ethical approval by Monash University Human Ethics Committee. By continuing, you are providing assumed consent for your data to be used for research purposes. This data will remain fully confidential and you will not be able to be identified by the information you provide. This means you remain completely anonymous. You also have the right to withdraw from the study at any time at no consequence. Please note however, given your data is anonymous, should you choose to withdraw, we are unable to withdraw any submitted answers as they are de-identifiable.

Remuneration

By participating in this research project, you will go into the draw to win 1 of 3 $50 gift vouchers.

Potential harms/risks

Some of the questions in this survey may also bring up sensitive issues for you, and you may feel confronted or uncomfortable in answering. If you are affected by the content in this survey, or do not wish to continue upon commencement, please know you are free to withdraw at any time. Counseling and support services are also available to you. These include:

The Butterfly Foundation: 1800 33 4673 (https://thebutterflyfoundation.org.au)
Headspace: 9027 0100 (https://headspace.org.au)
Beyond Blue: 1300 22 4636 (https://www.beyondblue.org.au)
Lifeline: 13 11 14 (https://www.lifeline.org.au)

All of these website are available internationally, however phone numbers are local to Australia only. If you need a crisis support line, please visit this website to locate your country:

https://ibpf.org/resource/list-international-suicide-hotlines

If you are concerned that you may feel discomfort in answering questions, please contact the study coordinator to discuss these concerns and further options available to you- Claire.Bristow1@monash.edu.

Data storage and results

All participant and study data will be stored electronically in password secured databases, accessible only to the research team. This data will be stored for at least 5 years. This includes the data that you may provide by entering the draw to win a gift voucher, i.e. your email address, and it will not be shared with any 3rd parties. Please note- this survey will also collect data on device and web browser used by participants.

The results from this research may be published in academic journals. Rest assured you will not be identifiable. Additionally, results may be available to the public upon conclusion of the study. If you would like access to these, please notify the study coordinator.

Contact

If you wish to contact any of the research team, you may use the following details:
Claire.Bristow1@monash.edu
Tristan.Snell@monash.edu
Janette.Simmonds@monash.edu

Complaints

Should you have any concerns or complaints about the conduct of the project, you are welcome to contact the Executive Officer, Monash University Human Research Ethics Committee (MUHREC):

Executive Officer
Monash University Human Research Ethics Committee (MUHREC)
Room 111, Chancellery Building D,
26 Sports Walk, Clayton Campus
Research Office
Monash University VIC 3800

Tel: +61 3 9905 2052 Email: muhrec@monash.edu Fax: +61 3 9905 3831

You may now continue with the survey.

First, we will start off with some basic demographic information.

Are you under 15 years of age?

- ○ Yes
- ○ No

Age

Gender

- ○ Male
- ○ Female
- ○ Non-binary
- ○ Other

- ○ Prefer not to say

Height (cm)

Weight (kg)

Nationality (as appears on your passport)

Ethnicity (social/cultural heritage or belonging e.g. Asian, Caucasian, Latino, African American, Indigenous peoples)

What device are you completing this survey on?

- ○ Smart phone
- ○ Tablet
- ○ Laptop
- ○ Desktop
- ○ Other (please specify)

Before viewing the advertisements, please take some time to answer the next questions in relation to how you are feeling right now at this moment.

Note- these questions are sensitive in nature and may bring up personal issues. Should this be the case, you are free to withdraw from the research project at any time without answering these questions.
Please also refer to the support services list available, provided at the beginning and end of this survey.

Please move the vertical slider to the point that most represents your feelings right now.

	0	100
Satisfaction with body WEIGHT (0= very dissatisfied, 100= very satisfied)		
Satisfaction with body SHAPE (0= very dissatisfied, 100= very satisfied)		
Desire to control body WEIGHT (0= no desire, 100= strong desire)		
Desire to control body SHAPE (0= no desire, 100= strong desire)		
Likelihood of engaging in weight control behaviours such as diet pills, laxatives, purging (vomiting) or excessive exercise (0= not at all likely, 100= very likely)		

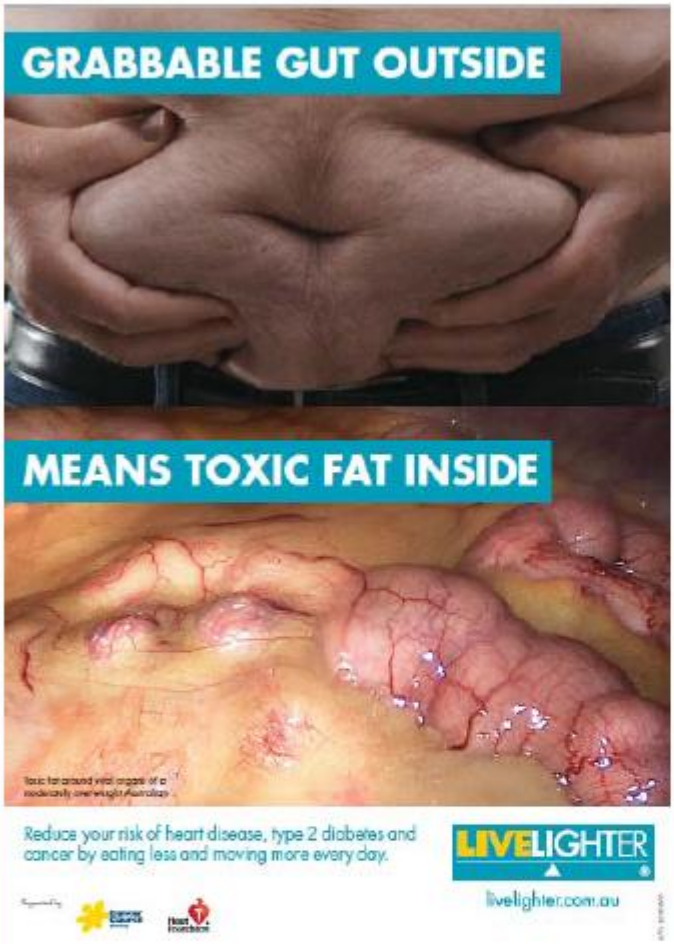
You will now be viewing some real life health campaigns that have been advertised around the world in the past 10 years. Images will be shown for 15 seconds before you are able to move on. Upon viewing the imagery, please provide your response on the scale provided.

Note- these questions are sensitive in nature and may bring up personal issues. Should this be the case, you are free to withdraw from the research project at any time without answering these questions. Please also refer to the support services list available, provided at the beginning and end of this survey.

Testing 1

13

Source: https://livelighter.com.au/.../HFWA00023%20-%20Campaign%20poster%20A4.pdf



Now that you have seen this advertisement, please move the vertical slider to the point that most represents your feelings right now.

	0	100
Satisfaction with body WEIGHT (0= very dissatisfied, 100= very satisfied)		
Satisfaction with body SHAPE (0=		

very dissatisfied, 100= very satisfied)	0	100
Desire to control body WEIGHT (0= no desire, 100= strong desire)		
Desire to control body SHAPE (0= no desire, 100= strong desire)		
Likelihood of engaging in weight control behaviours such as diet pills, laxatives, purging (vomiting) or excessive exercise (0= not at all likely, 100= very likely)		

Testing 2

~~1~~ 3

Source: http://mslimalicious.com/2012/01/swap-it-dont-stop-it-australian.html

Now that you have seen this advertisement, please move the vertical slider to the point that most represents your feelings right now.

	0	100
Satisfaction with body WEIGHT (0= very dissatisfied, 100= very satisfied)		
Satisfaction with body SHAPE (0= very dissatisfied, 100= very satisfied)		
Desire to control body WEIGHT (0= no desire, 100= strong desire)		
Desire to control body SHAPE (0= no desire, 100= strong desire)		
Likelihood of engaging in weight control behaviours such as diet pills, laxatives, purging (vomiting) or excessive exercise (0= not at all likely, 100= very likely)		

Testing 3

13

Source: https://www.pinterest.com.au/pin/390898442631375963/

Now that you have seen this advertisement, please move the vertical slider to the point that most represents your feelings right now.

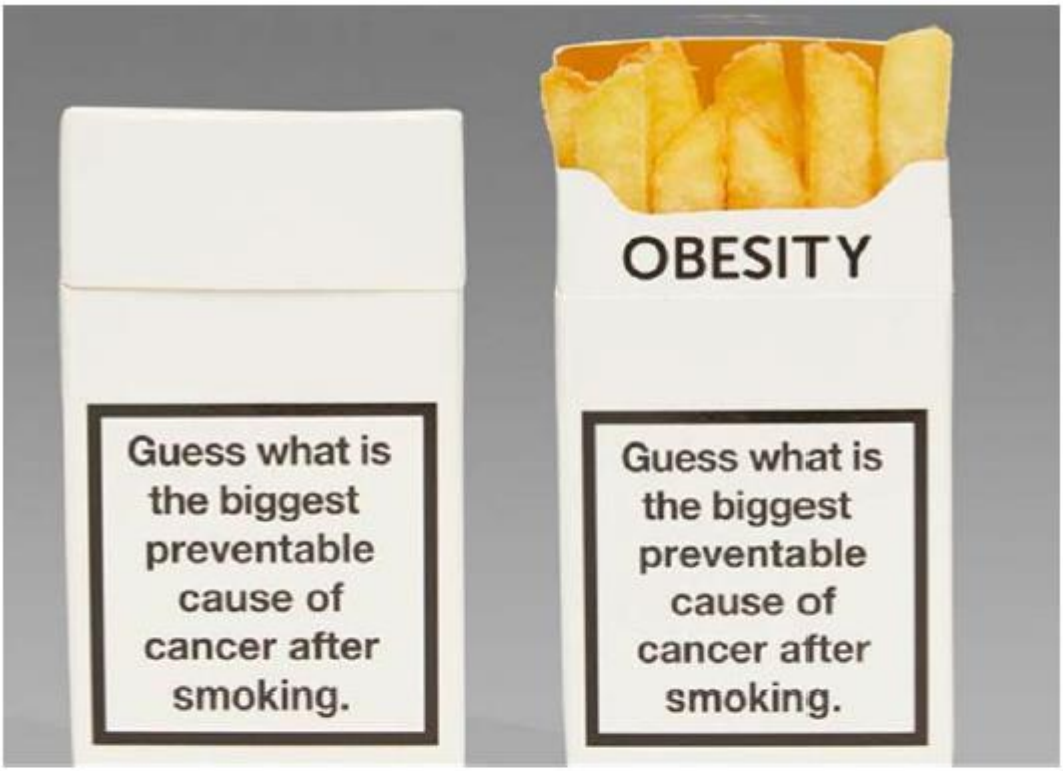
	0	100
Satisfaction with body WEIGHT (0= very dissatisfied, 100= very satisfied)		
Satisfaction with body SHAPE (0= very dissatisfied, 100= very satisfied)		
Desire to control body WEIGHT (0=		

no desire, 100= strong desire)	0	100
Desire to control body SHAPE (0= no desire, 100= strong desire)		
Likelihood of engaging in weight control behaviours such as diet pills, laxatives, purging (vomiting) or excessive exercise (0= not at all likely, 100= very likely)		

Testing 4

~~1~~ 3

Source: https://www.campaignlive.co.uk/article/this-not-fat-shaming-cancer-research-uk-stands-anti-obesity-campaign-backlash/1458472



Now that you have seen this advertisement, please move the vertical slider to the point that most represents your feelings right now.

	0	100
Satisfaction with body WEIGHT (0= very dissatisfied, 100= very satisfied)		
Satisfaction with body SHAPE (0= very dissatisfied, 100= very satisfied)		
Desire to control body WEIGHT (0= no desire, 100= strong desire)		
Desire to control body SHAPE (0= no		

desire, 100= strong desire)	0	100
Likelihood of engaging in weight control behaviours such as diet pills, laxatives, purging (vomiting) or excessive exercise (0= not at all likely, 100= very likely)		

Screening

Remember, if these questions brought up sensitive issues for you, support services are available and provided at the beginning and end of this survey.

We will now move on to some questionnaires that will help us understand more about your beliefs and behaviours around food, eating and body image.

The following questions are concerned with the past four weeks (28 days) only. Please read each question carefully. Please answer all of the questions in this section.

For questions 1-12, please choose the most appropriate answer:

	ON HOW MANY OF THESE PAST 28 DAYS...						
	NO DAYS	1-5 DAYS	6-12 DAYS	13-15 DAYS	16-22 DAYS	23-27 DAYS	EVERY DAY
1. Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?	○	○	○	○	○	○	○
2. Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?	○	○	○	○	○	○	○

	ON HOW MANY OF THESE PAST 28 DAYS...						
	NO DAYS	1-5 DAYS	6-12 DAYS	13-15 DAYS	16-22 DAYS	23-27 DAYS	EVERY DAY
3. Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?	○	○	○	○	○	○	○
4. Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?	○	○	○	○	○	○	○
5. Have you had a definite desire to have an empty stomach with the aim of influencing your shape or weight?	○	○	○	○	○	○	○
6. Have you had a definite desire to have a totally flat stomach?	○	○	○	○	○	○	○
7. Has thinking about food, eating or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	○	○	○	○	○	○	○
8. Has thinking about shape or weight made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	○	○	○	○	○	○	○
9. Have you had a definite fear of losing control over eating?	○	○	○	○	○	○	○
10. Have you had a definite fear that you might gain weight?	○	○	○	○	○	○	○
11. Have you felt fat?	○	○	○	○	○	○	○
12. Have you had a strong desire to lose weight?	○	○	○	○	○	○	○

For questions 13-18, please fill in the appropriate number in the boxes on the right. Remember that the questions only refer to the past four weeks (28 days).

	- Please insert number below
13. Over the past 28 days, how many times have you eaten what other people would regard as an unusually large amount of food (given the circumstances)?	

	- Please insert number below
14. On how many of these times did you have a sense of having lost control over your eating (at the time you were eating)?	
15. Over the past 28 days, on how many DAYS have such episodes of overeating occurred (i.e. you have eaten an unusually large amount of food and have had a sense of loss of control at the time)?	
16. Over the past 28 days, how many times have you made yourself sick (vomit) as a means of controlling your shape or weight?	
17. Over the past 28 days, how many times have you taken laxatives as a means of controlling your shape or weight?	
18. Over the past 28 days, how many times have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape or amount of fat, or to burn off calories?	

For questions 19 to 21, please choose the most appropriate answer. For these questions, the term "binge eating" means eating what others would regard as an unusually large amount of food for the circumstances, accompanied by a sense of having lost control over eating.

	- NO DAYS	1-5 DAYS	6-12 DAYS	13-15 DAYS	16-22 DAYS	23-27 DAYS	EVERY DAY
19. Over the past 28 days, on how many days have you eaten in secret (ie, furtively)? Do not count episodes of binge eating.	○	○	○	○	○	○	○

-

	- NONE OF THE TIME	A FEW OF THE TIMES	LESS THAN HALF	HALF OF THE TIMES	MORE THAN HALF	MOST OF THE TIMES	EVERY TIME
20. On what proportion of the times that you have eaten have you felt guilty (felt that you've done wrong) because of its effect on your shape or weight? Do not count episodes of binge eating.	○	○	○	○	○	○	○

	Please provide your answer using the number scale below, 0 being not at all to 6 being markedly						
	0	1	2	3	4	5	6
21. Over the past 28 days, how concerned have you been about other people seeing you eat? … Do not count episodes of binge eating.	○	○	○	○	○	○	○

For questions 22-28, please rate your answers using the same number scale. Remember that the questions only refer to the past four weeks (28 days).

	Please provide your answer using the number scale below, 0 being not at all to 6 being markedly						
	0	1	2	3	4	5	6
22. Has your weight influenced how you think about (judge) yourself as a person?	○	○	○	○	○	○	○
23. Has your shape influenced how you think about (judge) yourself as a person?	○	○	○	○	○	○	○
24. How much would it have upset you if you had been asked to weigh yourself once a week for the next four weeks?	○	○	○	○	○	○	○
25. How dissatisfied have you been with your weight?	○	○	○	○	○	○	○
26. How dissatisfied have you been with your shape?	○	○	○	○	○	○	○
27. How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?	○	○	○	○	○	○	○
28. How uncomfortable have you felt about others seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes)?	○	○	○	○	○	○	○

If you are a female, over the past three to four months have you missed any menstrual periods?

- ○ Yes
- ○ No
- ○ Not applicable

If so, how many?

Have you been taking the pill?

- ○ Yes
- ○ No
- ○ Not applicable

The next set of questions relate to attitudes towards appearance. Please read the following items carefully and indicate the number that best reflects your agreement with the statement.

Questions 1-10.

	Please rate your agreement from 1 (definitely disagree) to 5 (definitely agree).				
	1. DEFINITELY DISAGREE	2. SOMEWHAT DISAGREE	3. NEITHER AGREE NOR DISAGREE	4. SOMEWHAT AGREE	5. DEFINITELY AGREE
1. It is important for me to look athletic.	○	○	○	○	○
2. I think a lot about looking muscular.	○	○	○	○	○
3. I want my body to look very thin.	○	○	○	○	○
4. I want my body to look like it has little fat.	○	○	○	○	○
5. I think a lot about looking thin.	○	○	○	○	○
6. I spend a lot of time doing things to look more athletic	○	○	○	○	○
7. I think a lot about looking athletic.	○	○	○	○	○
8. I want my body to look very lean.	○	○	○	○	○

	Please rate your agreement from 1 (definitely disagree) to 5 (definitely agree).				
	1. DEFINITELY DISAGREE	2. SOMEWHAT DISAGREE	3. NEITHER AGREE NOR DISAGREE	4. SOMEWHAT AGREE	5. DEFINITELY AGREE
9. I think a lot about having very little body fat.	○	○	○	○	○
10. I spend a lot of time doing things to look more muscular.	○	○	○	○	○

For questions 11-14, answer with relevance to your family (include: parents, brothers, sisters, relatives)

	Please rate your agreement from 1 (definitely disagree) to 5 (definitely agree).				
	1. DEFINITELY DISAGREE	2. SOMEWHAT DISAGREE	3. NEITHER AGREE NOR DISAGREE	4. SOMEWHAT AGREE	5. DEFINITELY AGREE
11. I feel pressure from family members to look thinner	○	○	○	○	○
12. I feel pressure from family members to improve my appearance.	○	○	○	○	○
13. Family members encourage me to decrease my level of body fat.	○	○	○	○	○
14. Family members encourage me to get in better shape.	○	○	○	○	○

For questions 15-18, answer with relevance to your peers (include: close friends, class mates, other social contacts)

	Please rate your agreement from 1 (definitely disagree) to 5 (definitely agree).

	Please rate your agreement from 1 (definitely disagree) to 5 (definitely agree).				
	1. DEFINITELY DISAGREE	2. SOMEWHAT DISAGREE	3. NEITHER AGREE NOR DISAGREE	4. SOMEWHAT AGREE	5. DEFINITELY AGREE

	1. DEFINITELY DISAGREE	2. SOMEWHAT DISAGREE	3. NEITHER AGREE NOR DISAGREE	4. SOMEWHAT AGREE	5. DEFINITELY AGREE
15. My peers encourage me to get thinner.	○	○	○	○	○
16. I feel pressure from my peers to improve my appearance.	○	○	○	○	○
17. I feel pressure from my peers to look in better shape.	○	○	○	○	○
18. I get pressure from my peers to decrease my level of body fat.	○	○	○	○	○

For questions 19-22, answer with relevance to the media (include: television, magazines, the internet, movies, billboards and advertisements)

	Please rate your agreement from 1 (definitely disagree) to 5 (definitely agree).				
	1. DEFINITELY DISAGREE	2. SOMEWHAT DISAGREE	3. NEITHER AGREE NOR DISAGREE	4. SOMEWHAT AGREE	5. DEFINITELY AGREE
19. I feel pressure from the media to look in better shape.	○	○	○	○	○
20. I feel pressure from the media to look thinner.	○	○	○	○	○
21. I feel pressure from the media to improve my appearance.	○	○	○	○	○
22. I feel pressure from the media to decrease my level of body fat.	○	○	○	○	○

Have you ever been diagnosed with an eating disorder?

- ○ Yes
- ○ No
- ○ Prefer not to say

If yes, please provide detail as to your diagnosis.

If no, do you suspect you may be at risk or undiagnosed?

- ○ Yes
- ○ No

If you wish to go into the draw to win a $50 gift card, please follow the below link to enter your email address (this means your responses to this survey will remain de-identified).

https://monash.az1.qualtrics.com/jfe/form/SV_7QImswmQ1CSPSMl

You have now finished the survey.

We thank you for your time and effort. Your input has contributed to important research.

Please remember, if this study brought up any issues for you, the following support services are available:

The Butterfly Foundation: 1800 33 4673 (https://thebutterflyfoundation.org.au)
Headspace: 9027 0100 (https://headspace.org.au)
Beyond Blue: 1300 22 4636 (https://www.beyondblue.org.au)
Lifeline: 13 11 14 (https://www.lifeline.org.au)

All of these website are available internationally, however phone numbers are local to Australia only. If you need a crisis support line, please visit this website to locate your country:

https://ibpf.org/resource/list-international-suicide-hotlines

However, should you have any questions or need further support please contact the study coordinator - Claire.Bristow1@monash.edu.

Additionally, should you be successful in winning a gift card, you will be contacted via email.

Thank you!

Appendix H- Eating Disorder Examination Questionnaire (EDE-Q; Fairburn, 2008; Fairburn & Beglin, 1994)

Eating Disorder examination questionnaire (EDE-Q 6.0)

Instructions: The following questions are concerned with the past four weeks (28 days) only.

Please read each question carefully. Please answer all the questions. Thank you.

Questions 1 to 12: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days) only.

	ON HOW MANY OF THE PAST 28 DAYS ...	NO DAYS	1-5 DAYS	6-12 DAYS	13-15 DAYS	16-22 DAYS	23-27 DAYS	EVERY DAY
1	Have you been deliberately **trying** to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
2	Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?	0	1	2	3	4	5	6
3	Have you **tried** to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
4	Have you **tried** to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
5	Have you had a definite desire to have an **empty** stomach with the aim of influencing your shape or weight?	0	1	2	3	4	5	6
6	Have you had a definite desire to have a **totally flat** stomach?	0	1	2	3	4	5	6
7	Has thinking about **food, eating or calories** made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
8	Has thinking about **shape or weight** made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
9	Have you had a definite fear of losing control over eating?	0	1	2	3	4	5	6
10	Have you had a definite fear that you might gain weight?	0	1	2	3	4	5	6
11	Have you felt fat?	0	1	2	3	4	5	6
12	Have you had a strong desire to lose weight?	0	1	2	3	4	5	6

Eating Disorder examination questionnaire (EDE-Q 6.0)

Questions 13-18: Please fill in the appropriate number in the boxes on the right. Remember that the questions only refer to th past four weeks (28 days).

Over the past four weeks (28 days)….

13	Over the past 28 days, how many **times** have you eaten what other people would regards as an **unusually large amount of food** (given the circumstances)?	
14	… On how many of these times did you have a sense of having lost control over your eating (at the time you were eating)?	
15	Over the past 28 days, on how many **DAYS** have such episodes of overeating occurred (i.e. you have eaten an unusually large amount of food **and** have had a sense of loss of control at the time)?	
16	Over the past 28 days, how many **times** have you made yourself sick (vomit) as a means of controlling your shape or weight?	
17	Over the past 28 days, how many **times** have you taken laxatives as a means of controlling your shape or weight?	
18	Over the past 28 days, how many **times** have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape or amount of fat, or to burn off calories?	

Questions 19 to 21: Please circle the appropriate number. Please note that for these questions the term "binge eating" means eating what others would regard as an unusually large amount of food for the circumstances, accompanied by a sense of having lost control over eating.

		NO DAYS	1-5 DAYS	6-12 DAYS	13-15 DAYS	16-22 DAYS	23-27 DAYS	EVERY DAY
19	Over the past 28 days, on how many days have you eaten in secret (ie, furtively)? … Do not count episodes of binge eating.	0	1	2	3	4	5	6
		None of the times	A few of the times	Less than half	Half of the times	More than half	Most of the time	Every time
20	On what proportion of the times that you have eaten have you felt guilty (felt that you've done wrong) because of its effect on your shape or weight? … Do not count episodes of binge eating.	0	1	2	3	4	5	6
			Not at all	Slightly	Moderately		Markedly	
21	Over the past 28 days, how concerned have you been about other people seeing you eat? … Do not count episodes of binge eating.	0	1	2	3	4	5	6

Eating Disorder examination questionnaire (EDE-Q 6.0)

Questions 22 to 28: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days).

	ON HOW MANY OVER THE PAST 28 DAYS ...	NOT AT ALL	SLIGHTLY		MODERATELY		MARKEDLY	
22	Has your **weight** influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
23	Has your **shape** influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
24	How much would it have upset you if you had been asked to weigh yourself once a week (no more, or less, often) for the next four weeks?	0	1	2	3	4	5	6
25	How dissatisfied have you been with your **weight**?	0	1	2	3	4	5	6
26	How dissatisfied have you been with your **shape**?	0	1	2	3	4	5	6
27	How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?	0	1	2	3	4	5	6
28	How uncomfortable have you felt about **others** seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes)?	0	1	2	3	4	5	6

What is your weight at present? (Please give your best estimate.): .....

What is your height? (Please give your best estimate.): .....

If female: Over the past three to four months have you missed any menstrual periods?: **YES** ○ **NO** ○

If so, how many?: ○

Have you been taking the "pill"?: **YES** ○ **NO** ○

PAGE 3/3

THANK YOU

Appendix I- Socio-cultural Attitudes Towards Appearance Scale (SATAQ-4; Schaefer et al., 2015)

Sociocultural Attitudes Towards Appearance Questionnaire – 4

Directions: Please read each of the following items carefully and indicate the number that best reflects your agreement with the statement.

Definitely Disagree = 1
Mostly Disagree = 2
Neither Agree Nor Disagree = 3
Mostly Agree = 4
Definitely Agree = 5

	Definitely Disagree				**Definitely Agree**
1. It is important for me to look athletic.	1	2	3	4	5
2. I think a lot about looking muscular.	1	2	3	4	5
3. I want my body to look very thin.	1	2	3	4	5
4. I want my body to look like it has little fat.	1	2	3	4	5
5. I think a lot about looking thin.	1	2	3	4	5
6. I spend a lot of time doing things to look more athletic.	1	2	3	4	5
7. I think a lot about looking athletic.	1	2	3	4	5
8. I want my body to look very lean.	1	2	3	4	5
9. I think a lot about having very little body fat.	1	2	3	4	5
10. I spend a lot of time doing things to look more muscular.	1	2	3	4	5

Answer the following questions with relevance to your Family (include: parents, brothers, sisters, relatives):

11. I feel pressure from family members to look thinner.	1	2	3	4	5
12. I feel pressure from family members to improve my appearance.	1	2	3	4	5
13. Family members encourage me to decrease my level of body fat.	1	2	3	4	5
14. Family members encourage me to get in better shape.	1	2	3	4	5

Answer the following questions with relevance to your Peers (include: close friends, classmates, other social contacts):

15. My peers encourage me to get thinner.	1	2	3	4	5
16. I feel pressure from my peers to improve my appearance.	1	2	3	4	5
17. I feel pressure from my peers to look in better shape.	1	2	3	4	5
18. I get pressure from my peers to decrease my level of body fat.	1	2	3	4	5

Answer the following questions with relevance to the Media (include: television, magazines, the Internet, movies, billboards, and advertisements):

19. I feel pressure from the media to look in better shape.	1	2	3	4	5
20. I feel pressure from the media to look thinner.	1	2	3	4	5
21. I feel pressure from the media to improve my appearance.	1	2	3	4	5
22. I feel pressure from the media to decrease my level of body fat.	1	2	3	4	5

Note: SATAQ-4 Scoring:
Internalization – Thin/Low body fat: 3, 4, 5, 8, 9
Internalization – Muscular/Athletic: 1, 2, 6, 7, 10
Pressures – Family: 11, 12, 13, 14
Pressures – Peers: 15, 16, 17, 18
Pressures – Media: 19, 20, 21, 22

Appendix J- Recruitment Poster (Study 2)

HOW DO YOU RESPOND TO HEALTH MESSAGES?

OB_S__Y

is a cause of cancer

HAVE YOUR SAY. CONTRIBUTE TO IMPORTANT RESEARCH.

We are recruiting participants 15 years and over to answer a series of questions about public health messages. The survey will only take 15 minutes of your time and you may enter the draw to win a gift card valued at $50 for your participation.

[LINK HERE]

Appendix K- Manuscript (Study 2; Bristow et al., 2021)

Health Promotion International, 2021, 1–12
doi: 10.1093/heapro/daab107
Article

Anti-obesity public health advertisements increase risk factors for the development of eating disorders

Claire Bristow [1,*], Kelly-Ann Allen[1], Janette Simmonds[1], Tristan Snell[2], and Louise McLean[1]

[1]Monash University, Faculty of Education, 29 Ancora Imparo Way, Clayton, Victoria 3800, Australia and [2]Deakin University, School of Psychology, 221 Burwood Hwy, Burwood, Victoria 3125, Australia

*Corresponding author. E-mail: claire.bristow@monash.edu

Summary

Although overweight and obesity are increasing in prevalence, eating disorders such as anorexia nervosa, bulimia nervosa and binge-eating disorder are simultaneously on the rise. It is important to address the burden of disease of overweight and obesity on the population, yet there is concern that some of these efforts may be encouraging unhealthy weight control behaviours (UWCB). Using an online survey, 137 participants were exposed to four anti-obesity public health advertisements presented in random order. Weight satisfaction, shape satisfaction, desire to control weight, desire to control shape and desire to engage in UWCB were measured on a 100-point visual analogue scale. A significant effect of the experimental condition was found after exposure to Image 1 with a decrease in weight satisfaction, and increased desire to control body weight, body shape and engage in UWCB. Mean scores for UWCB also increased, on average, across all four image conditions. Public health advertisements targeting obesity risk encouraging unhealthy weight control and subsequent disordered eating behaviours. Those responsible for the implementation of such advertisements must consider very carefully the potential to cause unintended harm.

Key words: eating disorders, disordered eating, public health, overweight, obesity

INTRODUCTION

The increasing prevalence of overweight and obesity globally is well documented [World Health Organisation (WHO), 2018], and the burden of these conditions at both an individual and population level is well established (WHO, 2018). As such, there has been an intense focus on strategies that may reduce both overweight and obesity in recent years (Lean *et al.*, 2018). At the same time, eating disorders (EDs) are also on the rise, with conditions such as anorexia nervosa, binge-eating disorder and bulimia nervosa increasing at unprecedented rates [American Psychiatric Association (APA), 2013; The National Eating Disorders Collaboration (NEDC), 2017; O'Connor *et al.*, 2018; Watson *et al.*, 2010].

Whilst previously regarded as separate health conditions, experts have suggested that both overweight/obesity and EDs may be more interconnected than initially thought, sharing many of the same risk factors including high body dissatisfaction and unhealthy weight control behaviours (UWCB) (Irving and Neumark-Sztainer, 2002; Haines and Neumark-Sztainer, 2006; Darby *et al.*, 2007; Neumark-Sztainer *et al.*, 2007; Da Luz *et al.*, 2017).

The National Eating Disorders Collaboration (NEDC) has also stated that the rate of individuals diagnosed with comorbid obesity and EDs has increased more than either condition alone (NEDC, 2017). With disordered eating behaviours having shown to contribute to the development of obesity and vice versa, new recommendations suggest future interventions may benefit from integrated treatment and prevention strategies that focus on both conditions (Darby *et al.*, 2007; Puhl and Suh, 2015b; Da Luz *et al.*, 2017). Without integrated treatment and prevention, there is concern that efforts to address one condition (i.e. obesity) may unintentionally promote engagement in the other (i.e. disordered eating) (Watson *et al.*, 2010).

Of particular concern is the ongoing focus on weight as the main indicator of health, and that this intense focus may be further contributing to the 'thin ideal' that exists in today's society (Thompson and Stice, 2001). The thin ideal is the notion of a slim body type being more desirable than a larger body type, and is frequently portrayed by the media (traditional and social), film, television and pop culture in general (Thompson and Stice, 2001; Andrist, 2003; Bessenoff, 2006; Buser, 2011). The resulting desire for the 'perfect' body type, constant striving for weight loss and increased levels of thin internalization are believed to be contributing to rising rates of EDs and body satisfaction (Kilbourne, 1994; Thompson and Stice, 2001; Couch *et al.* 2016, 2018). With dieting considered the strongest risk factor for the development of EDs (Watson *et al.*, 2010), it is clear that strategies that aim to reduce one's weight must be considered with caution.

Weight-loss interventions have previously been analyzed for their potential to increase risk factors for disordered eating. Though the findings are mixed, it has been suggested that professionally administered and supervised interventions do not appear to influence ED risk factors (Butryn and Wadden, 2005; Davison and Deane, 2010; Sim *et al.*, 2013; Da Luz *et al.*, 2015). However, the NEDC has argued that measurements of these risk factors are usually inadequate (NEDC, 2017). That is, such interventions do not sufficiently plan to measure ED risk factors thoroughly, nor with validated measures (NEDC, 2017). Additionally, persons who report eating issues and/or psychiatric problems are often excluded from these interventions, hence failing to represent vulnerable populations and reducing the risk of affect by nature of excluding such vulnerable groups (NEDC, 2017).

Other efforts to reduce overweight and obesity have also been analyzed, such as the addition of nutrition labels and energy information (kJ/kcal) on restaurant menus. Larson *et al.* found that the use of kilojoule (kJ)/kilocalorie (kcal) labelling on menus is associated with binge eating and UWCB in both men and women (Larson *et al.*, 2018). An online randomized study also found that menu labelling resulted in restricted ordering of calories by persons diagnosed with EDs (Haynos and Roberto, 2017). This issue still remains contentious however, with a large systematic review and meta-analysis concluding that overall, menu labelling does not reduce calorie consumption amongst the general population (Sinclair *et al.*, 2014). Similarly, body mass index (BMI) report cards in US schools have attracted criticism over their potential to lead to extreme dieting and weight-based teasing (Evans and Sonneville, 2009). Whilst some have suggested that these potential harms outweigh the perceived benefits (Evans and Sonneville, 2009), the literature is currently inconclusive, with a large review finding insufficient evidence to support nor reject concerns of potential harm (Thompson and Madsen, 2017).

However, public health anti-obesity campaigns are less explored. Such campaigns have been vigorously administered by health and government agencies in an effort to curb the increasing prevalence of overweight and obesity (Saguy and Riley, 2005; Walls *et al.*, 2011; WHO, 2018). These strategies generally contain messages on the health consequences of being overweight as well as strategies for weight reduction (Dixon *et al.*, 2015; WHO, 2018). Concern has been expressed over the ways in which these efforts continue to portray an 'ideal weight' and the thin ideal, as well as the ways in which individuals are held solely responsible for their condition (Guttman and Salmon, 2004; MacLean *et al.*, 2009). This is believed to further contribute to weight stigma and bias experienced by persons who are overweight or obese, as societal messages that emphasize one body shape over another may subject those in larger bodies to guilt, shame, discrimination, body hate and even harassment (Thomas *et al.*, 2008; Puhl and Heuer, 2009; Puhl and Suh, 2015a). In Australia, this has recently been highlighted as a major topic of concern for the Western Australian Department of Health, who released a guide for media and communications professionals to reshape the way they address overweight and obesity in an effort to reduce some of these effects (Law and Pulker, 2020). Additionally, there is also the risk of messages fuelling body obsession, body dissatisfaction and weight control behaviours, further raising concerns of their potential to contribute to the development of EDs, and/or exacerbating symptoms in individuals who are already at risk or diagnosed (Szwarc, 2003; O'Dea, 2005; Hill, 2007; Puhl *et al.*, 2013).

Given a notable lack of literature in the field, the authors recently conducted a systematic literature review to examine the effects of public health messages on risk factors for disordered eating (Bristow *et al.*, 2020). This included negative body image, poor self-esteem, weight stigma, thin internalization and/or UWCB (i.e. restricting food intake, bingeing and/or purging); all of which are proven to be significant risk factors for the development of EDs (Thompson and Stice, 2001; Watson *et al.*, 2010; Watson, 2011; NEDC, 2017). The review identified that public health campaigns were often considered stigmatizing whilst also exacerbating the thin ideal and desire for thinness (Bristow *et al.*, 2020). Further, it was clearly evident that research in this area notably lacks the use of validated outcome measures (Bristow *et al.*, 2020). Additionally, risk factors were often measured as an aside to the main outcomes, and were not sufficiently focused on to draw strong conclusions, in line with previous findings from the NEDC (NEDC, 2017).

Given these findings (Bristow *et al.*, 2020), we aimed to directly investigate the effect of public health messages on risk factors for disordered eating using an online survey to address the following research questions:

Primary research questions

1. Does exposure to anti-obesity public health campaigns increase risk factors for disordered eating, as measured by;

a. weight satisfaction
b. shape satisfaction
c. desire to control body weight
d. desire to control body shape
e. desire to engage in UWCB

If any, are these effects more pronounced in individuals with ED symptomology and/or high levels of thin internalization?

Secondary research question

1. Is there any influence of gender, age, BMI, exposure time or device type on primary outcome measures?

METHODS

Participants

Participants were recruited via online advertisements that displayed an image of a real-life health campaign, and prompted viewers to click the 'learn more' button, which directed them to the explanatory statement and survey page. Participants were made aware that by proceeding with the survey they were providing implied consent. Any person aged 15 years or over with proficiency in English was eligible to participate. The survey was open to persons of all nationalities. Participants could opt-in to the draw to win one of four $40 gift vouchers upon completion. Table 1 provides an overview of participants' baseline characteristics.

Table 1: Baseline characteristics of 137 male and female survey respondents aged ≥15 years

	n	%
Female	89	65
Caucasian	71	51.8
Australian	71	51.8
	n	**mean (±SD)**
Age (years)	137	21.5 (±10.1)
Height (cm)	133	168.1 (±9.2)
Weight (kg)	136	68.5 (±16.2)
BMI	132	24.3 (±5.5)
WS pre-exposure	137	51.43 (±30.71)
SS pre-exposure	137	53.36 (±31.11)
WC pre-exposure	137	70.76 (±30.16)
SC pre-exposure	137	67.58 (±30.09)
UWCB pre-exposure	137	29.64 (±35.28)

WS, weight satisfaction; SS, shape satisfaction; WC, desire to control weight (weight control); SC, desire to control shape (shape control); UWCB, desire to engage in unhealthy weight control behaviours; %, percentage.

Survey development

An online survey was compiled using the software Qualtrics, Version XM, Copyright 2019. Studies of a similar nature and methodology were consulted alongside existing literature on the topic to develop the structure and content of the survey (Agliata and Tantleff-Dunn, 2004; Harper and Tiggemann, 2008; Knobloch-Westerwick and Crane, 2012).

The survey included four different public health campaign images, in random order (utilizing Qualtrics© block randomization features), from the last 10 years that focused on overweight/obesity reduction. These included advertisements from Australia, the United States and the UK, and were taken from campaigns such as '*Live Lighter*' and '*Swap It Don't Stop It*' (Morley *et al.*, 2016; O'Hara *et al.*, 2016). Advertisements ranged from confronting imagery (a male grabbing his stomach and an image of fat surrounding an internal org an with text eluding to "toxic fat"—Image 1), to less-confronting stimuli, such as an overweight male balloon character next to the '*Swap It Don't Stop It*' slo gan (Image 2).

Image 1
Source: https://livelighter.com.au/.../HFWA00023%20-%20Campaign%20poster%20A4.pdf

Image 2
Source: https://images.app.goo.gl/K7VvSRQM7euBY21A8

Image 3
Source: https://health.hawaii.gov/healthy-hawaii/files/2013/08/Posters-Rethink-Your-Drink.pdf

Image 4
Source: https://images.app.goo.gl/8wDKUPDxNx63rXFLA

Image 3 shows a female drinking from a bottle of soft drink with 'liquid fat' pouring out (text reads "don't drink yourself fat"), whilst Image 4 depicts a packet of cigarettes with French fries inside, comparing obesity to lung cancer. Images were purposefully chosen to allow for a comparison between different types of campaign imagery. A fixed minimum exposure time of 15 s was implemented to ensure participants were adequately exposed to each image before they could move to the next section of the survey.

The survey was piloted on a group of 10 voluntary participants whom provided feedback on user experience, survey design and comprehension. Minor amendments (primarily stylization) were made before the final version was distributed to participants.

Outcome measures

The primary outcome measures were: satisfaction with body weight (WS); satisfaction with body shape (SS); desire to control weight (WC); desire to control shape (SC) and desire to engage in UWCB (such as laxative abuse, excessive exercise etc., UWCB). The five outcomes were chosen based on their identification as known risk factors for the development of EDs (Fairburn and Beglin, 1994), as well as their use in related, previous research (Shaw and Kemeny, 1989; Champion and Furnham, 1999; Roehrig *et al.*, 2008; Knobloch-Westerwick and Crane, 2012; Simpson *et al.*, 2019). Each outcome was measured on a 100-point visual analogue scale (VAS). The five primary outcomes were measured pre-test (before exposure to any imagery), and then post-test after exposure to each individual image, in order to distinguish individual effects of each campaign (four times total). The VAS was chosen for its frequent prior use in measuring body dissatisfaction (Champion and Furnham, 1999; Groesz *et al.*, 2002; Harper and Tiggemann, 2008; Knobloch-Westerwick and Crane, 2012), and its sensitivity to small changes in state measures (Agliata and Tantleff-Dunn, 2004). Baseline VAS responses were not shown to participants following exposure.

Upon completion of the body weight, shape and control measures, participants completed the Eating Disorder Examination Questionnaire (EDE-Q) (Fairburn and Beglin, 1994) and the Social and Cultural Attitudes Towards Appearance Questionnaire (version 4, SATAQ-4) (Schaefer *et al.*, 2015). The EDE-Q is a validated, 28-item questionnaire used to diagnose ED psychopathology and is widely used in research studies (Luce and Crowther, 1999; Mond *et al.*, 2004; Rose *et al.*, 2013). The questionnaire provides frequency data on engagement in disordered eating behaviours (e.g. bingeing, purging, etc.) as well as subscale scores; eating restraint, eating concern, shape concern and weight concern (Fairburn and Beglin, 1994). Participants indicate roughly how many days in a 28-day cycle they have engaged in thoughts or behaviours related to disordered eating using a 7-point Likert scale from 0 to 6, with '0' indicating no days, '1' indicating 1–5 days, '2' indicating 6–12 days and so forth (Fairburn and Beglin, 1994). Subscale scores are obtained by calculating the sum of each item in the scale, divided by the number of items. An overall global score can also be calculated using the sum of each subscale, divided by the number of subscales. Higher scores are indicative of stronger engagement in ED behaviours and can be used for diagnostic purposes (Rø *et al.*, 2015). The questionnaire has demonstrated good internal consistency and test–retest reliability in previous research (Peterson *et al.*, 2007; Berg *et al.*, 2012; Rø et al., 2015).

The SATAQ-4 is a validated 22-item questionnaire that measures a person's level of internalization of appearance ideals (Schaefer *et al.*, 2015), and is often used in studies examining outside influences on an individual's level of internalization (Agliata and Tantleff-Dunn, 2004; Roehrig *et al.*, 2008). Five subscales exist within the questionnaire; internalization (thin), internalization (muscular), pressure (family), pressure (peers) and pressure (media). Participants rate their agreeance with *statements* such as "I want my body to look very thin" and "I feel pressure from the media to look in better shape" on a 5-point scale from "definitely disagree" to "definitely agree". Subscale scores are obtained by calculating the sum of each item in the scale, divided by the number of items. An overall global score can also be calculated by the sum of each subscale, divided by the number of subscales. Previous research has demonstrated good internal consistency and reliability in studies with both female and male populations (Schaefer *et al.*, 2015).

Finally, participants were asked to record any history of disordered eating, ED diagnosis or suspected risk. Due to the sensitive nature of the survey content and questions, participants were provided with content warnings and support service information at various intervals. The Monash University Human Research Ethics Committee (MUHREC) approved this study.

Statistical analysis

Data were directly transferred from Qualitrics© into IBM SPSS Statistics for analysis (Windows, version 26; IBM Corp., Armonk, N.Y., USA). Data are presented as mean ± SD unless otherwise stated. Parametric tests were used to analyze primary outcomes (1) and (2) and secondary outcome (1).

Preliminary analysis

Correlation analysis between each primary outcome measure (WS, SS, WC, SC, UWCB) found a strong correlation between WS and SS ($r = 0.74$) and WC and SC ($r = 0.58$). Previous research has suggested a strong correlation between *weight* and *shape* constructs warrants the collapsing of these two variables into a single measure (Berg *et al.*, 2012; Byrne *et al.*, 2015; Carrard *et al.*, 2015). However, to determine differences between baseline and post-exposure scores, these were kept separate.

Mean EDE-Q scores were: eating restraint = 3.18 (±1.59); eating concern = 2.78 (±1.53); shape concern = 4.18 (±1.81); weight concern 3.81 (±1.83) and

Table 2 Primary outcome measure scores (WS, SS, WC, SC and UWCB) at pre-versus post-exposure to individual image conditions

		Mean (±SD)	p
	Weight satisfaction (WS)		
Image 1	WS pre-exposure	51.43 (±30.71)	0.003*
	WS post Image 1	47.28 (±35.61)	
Image 2	WS pre-exposure	51.43 (±30.71)	0.123
	WS post Image 2	53.76 (±32.41)	
Image 3	WS pre-exposure	51.43 (±30.71)	0.279
	WS post Image 3	53.19 (±33.28)	
Image 4	WS pre-exposure	51.43 (±30.71)	0.407
	WS post Image 4	52.64 (±33.57)	
	Shape satisfaction (SS)		
Image 1	SS pre-exposure	53.36 (±31.11)	0.066
	SS post Image 1	49.10 (±33.50)	
Image 2	SS pre-exposure	53.36 (±31.11)	0.622
	SS post Image 2	54.36 (±30.98)	
Image 3	SS pre-exposure	53.36 (±31.11)	0.710
	SS post Image 3	52.59 (±31.97)	
Image 4	SS pre-exposure	53.36 (±31.11)	0.954
	SS post Image 4	53.26 (±32.14)	
	Desire weight control (WC)		
Image 1	WC pre-exposure	70.76 (±30.16)	0.001*
	WC post Image 1	77.22 (±29.72)	
Image 2	WC pre-exposure	70.76 (±30.16)	0.148
	WC post Image 2	68.12 (±31.93)	
Image 3	WC pre-exposure	70.76 (±30.16)	0.916
	WC post Image 3	70.95 (±32.07)	
Image 4	WC pre-exposure	70.76 (±30.16)	0.951
	WC post Image 4	70.64 (±32.92)	
	Desire shape control (SC)		
Image 1	SC pre-exposure	67.58 (±30.09)	0.002*
	SC post Image 1	74.29 (±29.82)	
Image 2	SC pre-exposure	67.58 (±30.09)	0.337
	SC post Image 2	65.44 (±32.58)	
Image 3	SC pre-exposure	67.58 (±30.09)	0.469
	SC post Image 3	69.13 (±32.06)	
Image 4	SC pre-exposure	67.58 (±30.09)	0.425
	SC post Image 4	69.15 (±31.70)	
	Unhealthy weight control behaviour		
Image 1	UWCB pre-exposure	29.64 (±35.28)	0.000*
	UWCB post Image 1	39.16 (±39.84)	
Image 2	UWCB pre-exposure	29.64 (±35.28)	0.244
	UWCB post Image 2	31.82 (±36.35)	
Image 3	UWCB pre-exposure	29.64 (±35.28)	0.130
	UWCB post Image 3	32.64 (±37.76)	
Image 4	UWCB pre-exposure	29.64 (±35.28)	0.003*
	UWCB post Image 4	35.68 (±38.19)	

WS, weight satisfaction; SS, shape satisfaction; WC, desire to control weight (weight control); SC, desire to control shape (shape control), UWCB, desire to engage in unhealthy weight control behaviours. *, significant after Bonferroni adjustment ($p = \leq 0.0125$).

Table 3: Primary outcome measure scores (WS, SS, WC, SC and UWCB) at pre-exposure versus average post-exposure scores across all image conditions

	Mean (±SD)	p
WS pre-exposure	51.43 (±30.71)	0.782
WS average post	51.72 (±31.32)	
SS pre-exposure	53.36 (±31.11)	0.544
SS average post	52.33 (±29.27)	
WC pre-exposure	70.76 (±30.16)	0.541
WC average post	71.73 (±29.54)	
SC pre-exposure	67.58 (±30.09)	0.281
SC average post	69.50 (±28.52)	
UWCB pre-exposure	29.64 (±35.28)	0.001*
UWCB average post	34.82 (±35.86)	

WS, weight satisfaction; SS, shape satisfaction; WC, desire to control weight (weight control); SC, desire to control shape (shape control); UWCB, desire to engage in unhealthy weight control behaviours.
Average scores obtained by calculating the sum of scores of the four different image conditions, divided by the number of conditions (= 4).
*, significant after Bonferroni adjustment ($p = \leq 0.0125$).

global score 3.49 (±1.52). Previous research on the EDE-Q has recommended a clinical cut-off for ED diagnosis for global scores ≥4 (Mond *et al.*, 2006; Giovazolias *et al.*, 2013; Penelo *et al.*, 2013). However, more recently, researchers have suggested that this cut-off is too stringent and an optimal cut-off point is more likely in the 2.5 range (Rø *et al.*, 2015). Considering this, the mean global score of the sample in this study is relatively high.

The SATAQ-4 scores in the present sample are similar to the norms from a sample of over 2000 men and women from various countries that formed the development and validation cohort of the SATAQ version 4 [internalization (thinness) = 3.21 (±1.04); internalization (athletic/muscular) = 3.03 (±1.10); pressure (family) = 2.70 (±1.23); pressure (peers) = 2.58 (±1.19); pressure (media) = 3.46 (±1.37) and global score = 3.01 (±0.81)] (Schaefer *et al.*, 2015). However, the internalization (athletic/muscular) mean score was higher in the present sample than that of the 'eating disturbed' subgroup in the same study (Schaefer *et al.*, 2015). The remaining subscale scores were similar to that of the 'healthy' subgroup (Schaefer *et al.*, 2015).

RESULTS

A total of 137 participants completed the survey in full, with 308 non-completers. Two participants were excluded from data analysis as they reported an age <15 years. Some demographic data points were also excluded as they were extreme outliers (height <120 cm, weight <36 kg and >150 kg). Independent samples *t*-

Table 4: Correlation between EDE-Q scores and primary outcome measures (WS, SS, WC, SC and UWCB) pre-exposure and post-averages

		WS pre-exposure	WS post-average	SS pre-exposure	SS post-average	WC pre-exposure	WC post-average	SC pre-exposure	SC post-average	UWCB pre-exposure	UWCB post-average
Eating restraint	$r =$	−0.363	−0.382	−0.319	−0.388	0.465	0.421	0.385	0.447	0.571	0.611
	$p =$	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Eating concern	r	−0.467	−0.525	−0.464	−0.539	0.460	0.391	0.343	0.382	0.638	0.685
	$p =$	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Shape concern	r	−0.626	−0.649	−0.638	−0.650	0.548	0.468	0.407	0.447	0.578	0.624
	$p =$	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weight concern	r	−0.696	−0.685	−0.599	−0.620	0.542	0.458	0.306	0.378	0.576	0.635
	$p =$	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Global score	r	−0.611	−0.634	−0.573	−0.620	0.566	0.488	0.402	0.462	0.659	0.712
	$p =$	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

WS, weight satisfaction; SS, shape satisfaction; WC, desire to control weight (weight control), SC, desire to control shape (shape control); UWCB, desire to engage in unhealthy weight control behaviours. Average scores obtained by calculating the sum of scores of the four different image conditions divided by the number of conditions (n 4). p = 2-tailed.

Table 5: Correlation between SATAQ-4 scores and primary outcome measures (WS, SS, WC, SC and UWCB) pre-exposure and post-averages

		WS pre-exposure	WS post-average	SS pre-exposure	SS post-average	WC pre-exposure	WC post-average	SC pre-exposure	SC post-average	UWCB pre-exposure	UWCB post-average
Internalisation (thin)	$r =$	−0.439	−0.454	−0.441	−0.457	0.313	0.280	0.289	0.297	0.535	0.517
	$p =$	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000
Internalization (athletic/muscular)	r	0.031	−0.021	−0.002	0.006	0.203	0.160	0.252	0.241	0.228	0.114
	$p =$	0.720	0.808	0.983	0.940	0.017	0.062	0.003	0.005	0.007	0.185
Pressure (family)	r	−0.364	−0.434	−0.330	−0.438	0.373	0.253	0.198	0.254	0.549	0.503
	$p =$	0.000	0.000	0.000	0.000	0.000	0.003	0.020	0.003	0.000	0.000
Pressure (peer)	r	−0.332	−0.338	−0.244	−0268	0.330	0.280	0.136	0.235	0.408	0.452
	$p =$	0.000	0.000	0.004	0.002	0.000	0.001	0.112	0.006	0.000	0.000
Pressure (media)	r	−0.324	−0.379	−0.317	−0.454	0.257	0.283	0.264	0.309	0.393	0.401
	$p =$	0.000	0.000	0.000	0.000	0.002	0.001	0.002	0.000	0.000	0.000
Global score	r	−0.408	−0.466	−0.383	−0.464	0.425	0.363	0.335	0.389	0.609	0.507
	$p =$	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000

WS, weight satisfaction; SS, shape satisfaction; WC, desire to control weight (weight control); SC, desire to control shape (shape control); UWCB, desire to engage in unhealthy weight control behaviours.
Average scores obtained by calculating the sum of scores of the four different image conditions divided by the number of conditions (n 4). p = 2-tailed.

tests found no difference in completers versus non-completers at baseline for age, height, weight, BMI or pre-WS, SS, WC, SC or UWCB, nor EDE-Q and SATAQ-4 scores. Twelve participants indicated they had been diagnosed with an ED. Seventeen participants thought they were at risk of or suffered from an undiagnosed ED.

Paired sample t-tests were performed to address primary outcome 1. A significant effect was found between baseline and post-exposure (Image 1) with a decrease in WS, and increase in desire for WC, SC and UWCB (Table 2). There was also a significant increase in UWCB intentions from baseline to post-exposure for Image 4 (Table 2). There was no significant effect of exposure for all other image conditions.

When comparing baseline scores to average post-exposure scores across all conditions, a significant effect was found for UWCB only (Table 3).

Correlation analyses were used to explore primary research question 2. Table 4 demonstrates that many correlation scores increased from pre-to-post exposure. Strong correlations between EDE-Q subscales and main outcome measures were observed. In particular, the

shape concern, weight concern and global score subscales were all strongly correlated with WS pre-and-post average scores, SS pre-and-post average scores, WC pre-only and UWCB pre-and-post average (r = 0.542–0.712). The eating restraint subscale was strongly correlated with UWCB pre-and-post average only, whilst the eating concern subscale was only correlated with WS and SS post average scores, as well as UWCB pre-and-post average.

In a similar way to the EDE-Q, Table 5 demonstrates that the strength of correlation between primary outcome measures and the SATAQ-4 often increased from pre-to-post exposure. A strong correlation was also found between the SATAQ-4 internalization (thin), pressure (family) and global score subscales for UWCB pre-and average only (r = 0.503–0.609, Table 5).

Regarding the secondary research question, independent t-tests found that males had higher levels of weight satisfaction (WS) at baseline than females (60.26 ± 30.85 vs. 49.04 ± 29.52, p = 0.05, equal variances not assumed), and after exposure to Image 1 (59.74 ± 37.10 vs. 43.33 ± 33.54, p = 0.016, equal variances not assumed). Females had higher weight concerns than males (3.98 ± 1.76 vs. 3.23 ± 1.84, p = 0.03, equal variances not assumed) on the EDE-Q, whilst males had a higher level of internalization (athletic) (3.43 ± 1.09 vs. 2.86 ± 1.10, p = 0.006, equal variances not assumed) on the SATAQ-4. There was no correlation between age, weight, height or BMI on primary outcome measures. Exposure time (s) had no effect on outcome measures. Device type did not affect outcome measures.

DISCUSSION

The present research examined participants' reactions to real-life anti-obesity public health campaigns from the perspective of body satisfaction and desire to change their bodies. By measuring these outcomes both pre-and-post exposure, we were able to determine significant changes in participants' feelings of body satisfaction and desire to engage in weight control behaviours from baseline to post-image-exposure.

First turning to participants, that 12 out of 137 reported being diagnosed with an ED, and a further 17 believing they were at risk/undiagnosed, is roughly in line with estimated national and global population prevalence (~14–19%) (Hay *et al.*, 2015; Micali *et al.*, 2017; Ward *et al.*, 2019). However, due to low numbers of epidemiological studies and the secretive nature of EDs, exact prevalence is difficult to determine. Additionally, in considering gender analysis (secondary research question 1), that females had higher levels of weight concern and lower levels of weight satisfaction is consistent with the literature and well-established evidence base that females typically suffer from poorer body image are at higher risk of developing an ED than males (Mellor *et al.*, 2010; Watson *et al.*, 2010; Peckmezian *et al.*, 2017).

In considering primary research question 1, there was a significant effect of the experimental condition (image exposure) on participants' satisfaction with weight, desire to change weight and shape and desire to engage in behaviours deemed unhealthy for weight control (e.g. purging, laxative use, etc.). Interestingly however, this effect was found for the most part after exposure to Image 1 only. Image 1 was one of the most graphic and confronting of all the experimental stimuli and depicted a male pressing together his stomach with text reading 'grabbable gut outside', followed by an image of the insides of internal organs with visible fatty deposits which read 'means toxic fat inside' (Morley *et al.*, 2016). The significant impact of this image might be explained by research that suggests weight centric messages that depict larger body types are highly stigmatizing (Couch *et al.*, 2018; Robinson and Coveleski, 2018), leading to intense feelings of body dissatisfaction and desire to change body weight (Carels *et al.*, 2010; Mensinger *et al.*, 2016). Interestingly, whilst Image 1 had a significant effect on WS, WC and SC, SS was not affected. Though some studies have found strong correlations between the constructs of *weight* and *shape* (Berg *et al.*, 2012; Byrne *et al.*, 2015; Carrard *et al.*, 2015), our results suggest that participant perceptions of these concepts are not always equal, thereby justifying their existence as separate variables when measuring an individual's level of body satisfaction. In addition, when average scores across all four experimental conditions were analyzed, desire to engage in UWCB was significantly greater post-exposure. This suggests that overall, exposure to anti-obesity health campaigns may encourage unhealthy weight loss behaviours.

Addressing primary research question 2, correlation analysis demonstrated that global EDE-Q scores were most strongly correlated with UWCB both pre-and-post exposure, with desire to engage in UWCB increasing at the same time as overall EDE-Q symptomology. Additionally, the SATAQ-4 global score was also most strongly correlated with desire to engage in UWCB. Hence, for this sample, the more a person internalizes the thin ideal, the stronger their desire to engage in weight control behaviours. Further, looking to pre-post measures, the majority of correlations increased following exposure to images. These findings further support

previous concerns that weight-loss messages risk increasing body dissatisfaction and weight control behaviours, and further exacerbate symptoms in individuals who are at a higher risk (Szwarc, 2003; O'Dea, 2005; Hill, 2007; Puhl *et al.*, 2013). However, our results also suggest that image/ad type may be important, with highly stigmatizing text and imagery likely to encourage more unhealthy behaviours.

That the present findings suggest anti-obesity campaigns contribute to UWCB, and notably in higher-risk population groups, is cause for concern when considering that these advertisements are usually presented to the masses on a population-based scale and do not discriminate between audiences. As such, vulnerable subgroups of the population (e.g. persons with EDs) may be at risk of further exacerbation of their condition, particularly after repeated exposures that occur in real-world settings. Indeed, it is not possible to know exactly how long exposure occurs for in a real-world environment, nor how long effects of exposure last for. However, it is important to consider that these advertisements do not exist on their own, and messages reinforcing the thin-ideal and stigmatization of larger bodies exist through many mediums across multiple platforms (i.e. traditional media, social media, social commentary) (Sypeck *et al.*, 2004; Himes and Thompson, 2007; Willis and Knobloch-Westerwick, 2014; Mingoia *et al.*, 2017). What's more, is findings show that exposure to these mediums (both traditional and social media) not only reinforce the thin-ideal but actually directly impact eating behaviours including restricting food intake (Anschutz *et al.*, 2009; Holland and Tiggemann, 2016). Hence, though the present study did not measure actual behaviour (only intentions in UWCB), we may infer that given an individual is likely to be exposed to multiple forms of messages through varying mediums and across multiple platforms at any given time, this combined impact is likely to amplify effects beyond single-exposure alone.

This research is not without its limitations. First, whilst participants were exposed to each image for a minimum of 15 s, exposure time beyond this minimum was not controlled for and some participants may have viewed images for longer, potentially exacerbating effects. Similarly, the exposure time chosen for this study may be greater than in a real-world setting, hence the potential for heightened responses. Additionally, given outcome measures were repeated four times, participants may have become fatigued and the lingering effect of previous campaigns could have carried over to subsequent images. This makes it difficult to fully distinguish the effects of a singular campaign. Finally, the purpose of the research was made very clear to participants, and multiple trigger warnings were provided throughout the survey. Consequently, participants may have felt more sensitive to the stimuli given they were already primed with the topic and nature of the study.

This research in a sample of 137 male and female teenagers and adults supports existing concerns that anti-obesity efforts may have unintended negative consequences on audiences (Guttman and Salmon, 2004; O'Dea, 2005; MacLean *et al.*, 2009; Puhl and Heuer, 2010; Watson, 2011; Couch *et al.*, 2018), but also seems to suggest that the nature of the message and/or image type plays an important role. Given studies of this nature have been limited so far, we recommend future research using validated measures to continue exploring messaging and image types in order to further understand how such advertisements could be improved and that impact on vulnerable population groups is minimized. In the meantime, the authors support the work of the NEDC and Western Australian Department of Health in encouraging a shift in narrative from heavily weight centric messaging and shaming tactics to a more neutral, balanced approach that focuses on health as a holistic endeavour opposed to the achievement of a certain body size (Watson, 2011; Law and Pulker, 2020).

AUTHORS' CONTRIBUTIONS

C.B.—Conceptualized the research study, recruited participants, performed statistical analysis and wrote the draft manuscript, K.A.—assisted with statistical analysis and the review and refinement of the manuscript, J.S.—assisted with the study design and reviewed the manuscript, T.S.—assisted with the study design and reviewed the manuscript and L.M.—assisted with statistical analysis and the review and refinement of the manuscript.

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ETHICS APPROVAL

Ethics approval was granted from the Monash University Human Research Ethics Committee.

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Appendix L- Qualitative Transcripts (Study 3)

Interview 1

(Recorder switched on)
Image 1

Q: But yeah just to get your perspective on those.

A: No worries.

Q: Beautiful. So I am just going to share screen with you now. So the first one we are going to look at I will get up for you now. And is that okay, can you see that?

A: Yep.

Q: So it's probably a bit small on your screen but hopefully-

A: That's better I can see it.

Q: All right, beautiful. Okay so I guess the first question I wanted to ask you, have I confirmed your diagnosis at all?

A: No I did write it-

Q: It was in the email. I have got that all written down. Beautiful, that's more than okay. So the first question I guess we're wanting to ask is have you seen this campaign before or similar campaigns?

A: No.

Q: You haven't seen this one. When looking to any similar campaigns that you might have seen like this or if you were to see this do you think this is something you would notice in your day to day life and if it was a billboard sign or something like that do you think that it is something that you would notice?

A: Probably not, but more so because it's like not eye catching, it's plain – it's white, black, there's a slight bit of yellow but yeah I wouldn't – like I wouldn't see it because of the marketing strategy – it's not because of the messaging.

Q: So if you were, once you did see it or with it being in front of you now, so disregarding that you haven't seen it before, what is your initial response to this campaign and this can be any feelings or emotions or perceptions that you might have of this when I first showed it to you?

A: I guess that I know that obesity is a huge issue for our health system, and like just in general, not even just obesity but being overweight has significant impact on people's health and therefore the health system. So I am not surprised by it. I guess it just confirms a fact to me.

Q: Okay so just confirming that it is an issue, and I guess is there anything that you like or dislike about the campaign upon first viewing it?

A: I don't think there is anything that I like or dislike. I think it's just very factual but it is quite plain at the same time.

Q: That's fine, and what about the understanding of what this campaign aims to achieve?

A: I think it's trying to target and for people who might not be aware it's trying to say that obesity is a large contributor to cancer rates, and so obviously people don't actively want to get cancer, so it's something that they can therefore like stop – try and prevent themselves from being overweight or obese.

Q: So taking all that into account let's look at this from the perspective of the diagnosis that you spoke to me about and the struggles that you've had over the past few years or even more than that. I think maybe *[removed for confidentiality]*?

A: *[removed for confidentiality]* was the diagnosis.

Q: Yeah so I want you to now think of this from the perspective of that condition and of that diagnosis. Do you think that that affects your understanding or your interpretation of this campaign?

A: When I was at the peak of my sickness I was quite afraid of being overweight or sort of becoming overweight and I wasn't overweight at the time, but I would actively prevent myself from becoming overweight, and in like the absolute worst I was quite almost fearful of people who were overweight and obese and so if they invited me over for dinner or something like that or inviting me out I was really conscious of where we were going because I thought if they were choosing the restaurant then it would be somewhere that was unhealthy. That was at the absolute peak of my illness and that's not how I am now but I think at that time this would have reconfirmed to me that being overweight or obese is very – like it makes you sick. It's not about the physical appearance it's about your overall health.

Q: So then I guess saying that and how you thought of things during that time do you think a campaign or an advertisement like this would have influenced that perception that you had or do you think it would fuel that?

A: I think it would just reconfirm that; I don't think it would aggravate it but it would just be like what you're doing is right. It would be particularly about obesity and being overweight, I know this campaign is specifically talking about obesity but I was never close to being obese so I was never worried about potentially being obese but I was worried about becoming overweight. So think this would just reconfirm to me that like being in a healthy weight range is important because I would get sick otherwise.

Q: And do you think that others would respond in a similar way so do you think that was specific to how you view it?

A: I don't know but I do know that mental health in general and eating disorders are very specific to the person, and also I was diagnosed with EDNOS so it's like such a broad spectrum and everyone

has a different – like they can be diagnosed with EDNOS but everyone is different. So I don't know if others would think like I did but I remember my psychologist at the time actually asked me if I was afraid of people who I perceived to be fat? And I was like yeah but I had never really thought about it because I just thought that's what was normal if that makes sense. So *[removed for confidentiality]* had obviously seen that before because *[removed for confidentiality]* knew to ask me.

Q: So I am interested then with you saying that that's how you felt and in that thinking do you think that that's a fair way to feel?

A: Oh absolutely not, it's not something I am proud of but it was just a symptom of how I was feeling about myself. It was not something that I – it's not fair to anybody and I now know that there is a lot of other reasons why people have weight issues, but I think that the way that I was thinking at the time was that everybody controls their weight and it's something that you can control, but also in saying that my eating disorder stemmed from stress. So it was I used food as a control mechanism, so then that was – like I just saw people who were overweight and obese as having no control. And like that's not how it is, but at the time that's how I was perceiving it.

Q: So what do you think of this ad in particular saying the way your perception has shifted. Of this comparison of smoking and eating and obesity and the image of the fries there is if they're equivalent to cigarettes. What do you think about that?

A: I guess it's hard because smoking, like I guess food in general is so tied up in our social world, it's like you celebrate by going out for a nice meal or getting a bottle of champagne, and that's completely acceptable and you're catching up with friends and you go out to a restaurant so I think that where smoking on the other side is kind of quite taboo and it's like if you want to smoke you have to go this specific designated area. It's almost shameful, like you have to be in this vicinity to do that whereas food is the complete opposite. So I think the comparison between smoking and food is a lot more nuance because eating is A we need it to survive, but B it's like it's very tied into our social constructs whereas smoking isn't.

Q: No that's a beautiful answer like … as you said. I was just interested in hearing that you were saying that you felt that those judgements weren't fair and then perhaps if that changed the way that you perceived this in any way. So keeping that in mind would you have any suggestions for improvement of something like this image in particular?

A: Do you mean from an eating disorder background or just like a generic my first impressions?

Q: Can you give me both?

A: Sure, okay so just general it's not very eye catching; it's quite like – I mean it needs a question mark because it's a question? I mean it's clear that it's meant to be a cigarette carton and it's got fries in it but I think that – it's just not a very good ad in the way that it's targeted and it doesn't have a clear demographic that it's looking at. I think it could be targeted to certain age groups as well. From an eating disorder perspective I would say that it just reiterates – it just kind of reconfirms what I was thinking at the time that obesity is unhealthy and it needs to be avoided and for me that was – like it needs to be avoided at all costs which is not a healthy way to look at that, but I think that – I mean an eating disorder is significantly more unhealthy than obesity for the time, whereas obesity is more of a long term thing, whereas eating disorders can be a bit more short lived. So yeah I think it's just going

to reconfirm to anybody who is in that eating disorder that what you're doing is important because you will stop yourself getting cancer.

Q: Beautiful thank you for providing both those perspectives. I think it's great, we will move to the next one if that's okay?

A: Yeah.

Image 2

Q: I will ask you some similar questions around that so there is four images in total, and I will just zoom out on this one a tiny bit. So this is the second image – have a look at this one – what is your initial reaction here?

A: Don't drink yourself fat, choose water instead, re-think your drink. I do agree with that. The only thing though is a lot of soft drinks now are really low sugar and they are targeted or their market is like 1-2 calories. Like you could argue that looking at this you could just go and get a diet coke rather than get a regular coke you choose a diet coke and you are not drinking yourself fat.

Q: Have you seen this one before?

A: No.

Q: You haven't see it, beautiful. And how about this image, do you think you would notice it in your every day life if you were walking and going about your business would you notice this one?

A: I think I would notice it because the girl is like drinking it as going down her throat. It's a weird image. Also like don't drink yourself fat. Fat is like a very nuanced word. Like what does fat mean and the definition is going to be different between people. At my absolute worst I thought that was in a healthier weight range whereas for other people their definition is going to be anything above a healthy weight range, and then you get into this whole thing of whether or not they BMI is a true indicator of how unhealthy you are and muscle mass versus fat mass. So the use of the word fat it's not universal. You're going to be targeted people in different ways and that's going to be uncontrollable.

Q: Lovely, and does it bring up I suppose from you said it … image and you probably would think – does it bring up any emotions for you – any emotions or feelings?

A: I guess I don't really drink soft drink but I don't think that's from an eating disorder thing. I just don't really like fizzy stuff. So I think that would just like – that would just sort of say okay it's good to not drink soft drinks to me.

Q: And is there anything in particular that you would say you like or don't like about the campaign?

A: That people should definitely drink more water than they do and that's like – not from a weight perspective at all. That's just general health and so I do think it's positive that they are promoting

drinking water but then to put fear around – it's essentially puts fear around not drinking water and then that's quite like again goes into that social construct of – it's not like you come over for dinner and I am going to serve you all water. Like I am going to serve a nice drink. So I think there is a lot of nuances around it but in general people should drink water, and that's not coming from an eating disorder perspective, it's just basic human biology. So yes people can choose water over soft drink that's a good thing but it doesn't mean they have to do it all the time.

Q: Do you think – so you have said that answer kind of said your understanding of what it's trying to achieve. How do you think that might make others feel view it opposed to how you would view it or do you think it would be similar?

A: I think people in general seek out the advertisements that they want to see. So you're going to take note of things that are relevant to your life. So somebody who drinks a lot of soft drink is probably going to look at this and they are not doing to see this billboard and say oh I should change to water, but someone who drinks a lot of soft drink and has recently decided to drink more water or become a little bit healthier or lose a bit of weight is going to see this and be like yeah great message, I am going to re-think my drink. So just in general people seek out the messaging we want to see.

Q: What about then someone with your experience or a similar condition or what about from that perspective?

A: I think when I was really sick and I was like binge eating and vomiting and doing all those fun things, that would reconfirmed like – I used to not eat and would just have water. That was really bad times, but also like there's a common thing in the eating disorder world where you have soda water or tonic water because it's bubbly it fills your stomach but it has very low calories. So like you can sort of drink water and be fill but you are not getting any nutrients obviously – it's water. So like at some stages I was using water as my meal source so then you could go in that side of okay drinking water is important but also you can drink too much water. And your relationship with it can be negative whereas now being in therapy I can look at that and say well there's so much around this like I probably wouldn't pay any attention to it because I am like drink yourself fat – define fat for me? What are you considering that to be?

Q: Does that make you – how does that make you feel for people right now would see this and in the position that you were position back then?

A: I think any time when I would see the word – now when I see fat or fat shaming or anything that's not body positivity I actually don't look at it because I know it can lead to me going into a spiral, and at the time I used to follow all these Instagram accounts that were like clean eating and Keto and you name a restrictive diet and I did it, and that like now I purposefully don't do that because as soon as you start putting restrictions that in my experience, as soon as you put restrictions in it makes you want it more and then when you cave which you eventually will there's a shame around that. So if someone was to look at this and they had said I am never going to drink soft drink again this would re-confirm that is a great decision, but eventually they are going to get a point where they do cave because you can't avoid soft drink. I mean theoretically you could but realistically you kind of … soft drinks forever or non-watered drinks for ever and then you get into this – like you have it and it's a glass of soft drink or it's two glasses of soft drink and then there is like this shame around it like this depressive state; feeling like you are worthless because you can't do what you said you were going to

do. So I think that any advertising – anything that says you can't have a certain food or drink or whatever is detrimental to the population who are trying to restrict that thing.

Q: What a fantastic answer, thank you so much for that. That's super insightful and I guess based on that response then do you think it could be improved this campaign?

A: So yes but then it's all very complicated … -

Q: … (Talking over each other).

A: I understand why you need to a whole PhD around it. So you can turn it into something like moderate your drinks and I guess they are kind of doing that with a re-think your drink because it's not saying never drink soft drink again, it's just saying be more conscious of it but everyone's interpretation of moderation is very different. For some people moderation is a cheap day or a cheap meal and others it's like I will 90% of the time I will swap out soft drink for water but I am happy to have it 20% of my drinks and that's a health decision for them. When marketing campaigns rely on people's moderation everyone's version is so different, like it's hard to say that that would be effective.

Q: So you have said the text a lot, what about the image though?

A: I mean she is obviously quite skinny, or within a healthy weight range. It is like it's implying that if she kept drinking soft drink she would get fat, but I think probably at my peak I probably would have thought yeah okay I can't drink soft drink because I will get fat, but I was also not eating food. So anything would make me think that. You could make replace that soft drink with chips or at one stage I was not eating white foods like totally, so you could have replaced it with like cauliflower and I would have been like I can't have cauliflower. So it does imply that this skinny person will get fat if they drink soft drink but that's a single message. You would have soft drink every single day forever but if you exercise and had a balanced diet everywhere else you would be fine.

Q: So then you think that this could maybe be a bit more considerate of those things that you have just mentioned?

A: I think it puts blame on a single source and no one gets fat overnight. It's not like you eat a single donut and you're obese. It's weight and being within a healthy weight there is so many variables to it, that advertising campaigns that rely on one thing is like it just supports restrictive dieting I think.

Image 3

Q: I want to know what you think. So let's have a look at the next one, so this is a bit different. This is another real-life campaign; have you seen this one before?

A: No I haven't seen this.

Q: So what's your initial reaction then?

A: This is my overall method as a healthy person now; this is what I try and do. I do not believe in restrictive dieting in any capacity unless someone has got like a severe allergy to it. That is the only time I support restrictive dieting. Like the measurement thing, what is it? Measuring tape insinuates that if you swap it but don't stop it you will lose weight which you probably well if you go from eating unhealthy foods, like if you replaced fries – even if you replaced deep fried chips with oven baked chips you would probably lose a bit of weight. So I think the swap it don't stop it is a good message but then also saying if you swap things you will lose weight implies that you need to lose weight, and any campaign that says you need to lose weight can be detrimental to those who don't need to lose weight. There is a lot of people who need to put on weight and that just continues to reinforce the overall we need to lose weight.

Q: So you said the tape measure, what about the little blue balloon there?

A: Yeah weird choice, obviously I mean he is just weirdly proportioned, he's got skinny legs and skinny arms and then a bulging belly. I think if I saw that when I was really sick I would probably be like yeah you can lose weight, you've just got to swap it but I was also, when I was really bad I would swap it and never go back to it, so I didn't do that don't stop it thing, whereas now that's what I do like I acknowledge like we still have takeaway nights and I still eat ice cream and things that are traditionally very bad for you, but that means that if I – I just find it more effective and it's not – I absolutely refuse to go on any diet. I just moderate what I am eating and just try and make healthier choices.

Q: Would you notice this campaign do you think in your day to day life?

A: When I was really sick I would have; now I pretty much actively avoid campaigns that have anything to do with weight loss just because I know I can get myself into a cycle when I am looking – if I am looking at dieting in any form I can get quite attached to that, and I can basically pin all my life on a diet essentially and if I do well at it I'm really succeeding in life, and if I don't do well I'm a terrible human being. So I mean that's the extremes of what I feel but in general I just avoid anything to do with weight loss and weight gain etc, and just focus on how I am feeling day to day. So I consciously think of okay after I go for a run I feel this, rather than okay I have lost 300 grams after that run.

Q: When you say you actively avoid it; how do you mean?

A: So I purposely – life if I see it it's not like I walk around with blinders on – if I see it I choose not to analyse I guess. I just look at it and acknowledge that it's there, but that's the same with most of the things that I see generally. As I said before I think you seek at the advertisements that you want to see. They are all around you but there are so many that you don't pay attention to all of them. So the messaging like any day we would see hundreds of advertisements but you only pay attention to the ones that are relevant to you. So I prioritise not paying attention to messages about weight loss.

Q: But you're saying back when you were at your worst?

A: Yeah.

Q: Would that be the opposite or-?

A: Yeah absolutely but also if I was at my worst of – I am not eating for this week or whatever I would focus on these adverts and then I would go through like a binge stage I would focus on McDonalds adverts and I would be like KFC got the newest Zinger box or whatever. Like I would go kind of the opposite way of sort of like I would focus on what was the newest and the best food. So it just fluctuated whereas now I would be more likely to look at I don't know what am I into at the moment? Like flowers, I am really into gardening so I would be more likely to look at adverts to do with that.

Q: So what do you think and I think you have kind of covered off on this, but what exactly do you think this is trying to achieve this one?

A: I think this is a broadly healthy message to send in that restrictive dieting does not work in the long term. It definitely does work in the short term if you can stick to it but it's not realistic for the rest of your life. So I think it's a realistic advert I would say.

Q: And what about how others would perceive it?

A: I think it's similar to that last advert, like relying on people to have their own definition of moderation and swap it, like someone could swap a regular coke for a diet coke, and that doesn't mean that it's necessarily healthier or sorry it doesn't mean that it's necessarily good for them but it is a slightly healthier choice, and therefore they might think that they're making a good nutritious diet choice, and there was like I have a real issue with the adverts that that are promoting like lowered salt. Salt is actually not bad for humans, but salt just has such a bad rap. So things that are saying this has lower salt. We are usually getting chemicals that are significantly badder for you than salt. So I there needs to be a lot of education around food like what is actually healthier for you. A natural substance like salt, like sure don't eat – like moderate – have a regular amount but if you are having chemicals that you can't even pronounce the name of in favour of not eating salt which is a natural mineral that's not a good thing.

Q: It's a good point, and I think education will play a big part as well in how this is perceived. So my last question for this one would be would you have any suggestions for it in terms of improvements?

A: I don't really understand the balloon man, like I don't get what that message is trying to say.

Q: Okay.

A: I don't know some kind – it depends what they are trying to – if they are saying swap it don't stop it and you will lose weight, then the rest of the man needs to be proportioned, but if they are saying swap it don't stop it so that you are generally healthier probably get rid of the measuring tape.

Q: Interesting, lovely. Are you ready for the last one?

Image 4

A: Yeah.

Q: Beautiful, thank you, you're doing a fantastic job. All right I will just zoom out on this one, have you seen this one before?

A: I don't know if I have necessarily seen this one but I have seen very similar like similar things. I think I have seen one that was about the heart there was fat around the heart.

Q: From the Live Lighter campaign you think?

A: Possibly.

Q: So what's your initial reaction?

A: I think that's really gross – like I wouldn't – like I don't like looking at it – I think it's very disgusting.

Q: You think you would notice it in every day life?

A: Absolutely.

Q: And besides that disgust, firstly why do you think it brings up disgust for you? Is it because of the imagery or is it because of your previous perceptions of fat?

A: I generally don't like body – like I don't like blood and things like that. So that would be one factor. The guy, I'm assuming it's a guy holding his belly, that was something that like I used to do sort of pinch tests and grab my belly and if I could grab what I at the time thought was fat I would be like I've got to keep losing weight, whereas now I know that it's mostly skin and like this particular guy would actually be quite healthy. I mean probably not if that's his actual insides but he could be a healthy human who just has like a hormonal imbalance or is just bloated or something like that. But that toxic fat inside, I don't really understand what – what does that toxic fat mean? Because toxic to me implies that it's detrimental and he would have minutes to live. Like toxicity is quite an extreme word to use I think. So I don't understand how someone could have toxic fat and survive.

Q: Wonderful I guess you have kind of said there but my question was going to be is there anything that you like or dislike about this campaign, and I am going to say it's probably stronger on the dislike side, but just elaborating on that if you could?

A: I mean grabbable gut outside, I think that would really add to negative body image around people who are just post-partum, so they've just had a baby and then there is like the whole thing that they've got to get to back to your pre-body weight. That's like pretty awful if you have just grown a human life and now you have a grabbable gut, but at the same time I don't think I would ever let myself get to that level – that weight range that the guy is, but I don't necessarily think that's from a – I mean it could be from an eating disorder perspective. It's hard now for me to understand what is part of just my everyday understanding of the world and what comes from my eating disorder but I don't think I would let myself get to that level because I like the way I look in certain clothes and I would want to be able to keep wearing them, and since I was really sick I have put on maybe from my lowest to now would probably be about 20 kilos which is a huge amount for somebody who is like defining themselves off a scale, but I don't think that I am unhealthy, and I would say that even though I am probably at the heaviest weight that I have been in my whole life I think I am probably mentally the

healthiest that I have ever been and for me to look at that and say grabbable gut outside means toxic fat inside. I think I was doing more damage to my body when I was at my lowest weight than I am at my heaviest weight so it's very nuanced. Like when I was forcing myself to throw up that does awful things to your teeth and your what is it – your oesophagus, like it physically hurts and people don't realise that it's a very painful experience and now sure I've got a couple more kilos that I probably should have but I am happy with that. So for someone to then say that I have a grabbable gut, not to that level but I do have one. It doesn't mean that I am unhealthy.

Q: Okay so having said all that, how does that mean that you perceive this campaign looking at it now and that can be from how you do or how you think others may look at it?

A: I think that I perceive it as, like I think I have two reactions to this, like my first initial though was yeah I never want to be like that. I wouldn't let myself get to that and I said that to you, like I wouldn't let myself become that overweight and then I think about it more and I am like well if I do let myself get to be that level I am no lesser of a human. My weight is not going to make me a terrible person, and when I was at my peak I was like if you're fat you're a horrible person because you can't control things. So I guess my first instinct was like that reconfirms that I need to lose weight, but then I have that knowledge to think about it and go no because when I was losing weight I was really bad at it. I did things that I shouldn't do that were more detrimental to me.

Q: So do you think others have that understanding?

A: Probably not because it has taken me like yeah *[removed for confidentiality]* and therapy and like I wouldn't even know how many thousands I have put into like psych appointments. So I think that overall I have a very strong understanding of your weight doesn't define your health. There is a lot of people who are very very skinny and are so malnourished, like they are actually very unhealthy as well, but in saying that I do still know that being overweight or obese is unhealthy, so I think it's a balance of the health and if your focus on your physical health in terms of weight only comes at the significant detriment of your mental health then that's not a healthy approach that you have, but if you can balance the two and if you can have a healthy mental approach to your physical look then that's what you need to achieve, whereas this advert is saying that the physical side is the most important thing that you need to care about.

Q: Does that mean that you would have any suggestions for improvement?

A: Tough one, I don't like the look of it because it's gross and I would say that would be very hard for kids to see. There are a significant proportion of the Australian population who have that grabbable gut, so it's going to – you know it might be a positive thing for other people to see and say, like if they are in the right mental state that might be a thing that says okay I do need to lose a little bit of physical weight but it could also back the other way. If someone already has depression or is in a depressive state that's going to contribute to that, but then you know you can't make adverts that cover the entire feelings – like the population's feelings. So it's hard, I do feel very sorry for marketing – people in marketing, but I don't know in terms of suggestions there's so many nuances to it.

Q: That's okay I think you have kind of inadvertently suggested them … by the way by the way you have addressed it if that makes sense? I think you have to read between the lines there which is great. So that's the final image, the next few questions I just want to ask you about all of them as a whole.

A: Sure.

Overall

Q: About whether it's been you in the last 30 minutes or so, rather than each individual one. So looking at it as a whole overall what are thoughts and feelings about these messages and these messages and these campaigns?

A: In general weight loss campaigns are I perceive as quite detrimental. I think that any advertisement or any diet or any recommendation to completely stop anything is not a positive message to be sending, and for me it's mostly come from food but even stop watching like – like stop having screen time half an hour before that. That's a common message that comes out now, but I don't think that's a positive message because some people need that and that's how they get to sleep. So any messaging that completely, that sort of stigmatises something as bad, totally I think is a negative marketing campaign.

Q: And do you see any differences between these four that I have showed you?

A: Yeah I think of the ones that you have shown me the best one was the stop it don't swap it. That is a strong message – I think that's the best message that you should send to anyone looking at weight or weight loss or healthy dieting etc, but it implies that there is moderation, and as I said there are nuances with moderation and people have a different definition of what is an acceptable amount, but overall it's not saying anyone thing is bad. The grabbable gut outside means toxic fat inside really does sound like he's going to die at any stage, and I mean it's not good for people's health and it's not good for the health care system, but there are plenty of obese and overweight people who actually live long lives. So it's not as extreme as that.

Q: Wonderful, and my last question for you is do you have any other thoughts or inside or insights or comments that you would like to add?

A: I actually I find the hardest thing to be around is non-government campaigns and influences and these things like I guess people that don't really have a lot of expertise in it, but even just off the top of my head that 28 by Sam Wood. I mean he was the Bachelor and then Michelle Bridges, whatever her thing is. Like I find when pop culture meets health very challenging and I purposely don't get involved in influencer culture because I know that that very quickly sends me into a negative spiral, and that's not a government message. That's not coming from a registered health board. I do know that they do often have like dieticians and nutritionists behind them but it's not like government – it's like if you want a diagnosis you can shop around at a doctor until you find it. So you can do the same with a dietician and a nutritionist and if you want to find someone who says you should never eat carbs again you can find someone who says that and say well my doctor said that. So any government advertising or state wide campaigns have a place but they are not the most detrimental. It's influencer culture and when pop culture meets messaging.

Q: What a wonderful insight. Thank you so much, so I guess that's all the questions. I just wanted to debrief you a little bit on why we are doing this. So this is just for you information, so it's really

interesting that you said about the influence in things. Fortunately there are a lot of people researching that at the moment.

A: Yeah.

Q: Which is great, but there actually hasn't been many things around what about these official campaigns and things. They have been looked at a bit, but nowhere near as much as the things like social media and things. So we wanted to see what about the actual official messages and advertisements that come out. Could they potentially be impacting people both with and without eating disorders? And I guess just to say as well just how grateful I am for you just sharing those experiences and things. So a bit of history too and why I am researching this is I have recovered from anorexia as well. So everything that you were saying – I didn't want to say it while you were speaking. I just wanted to mention it at the end. So much of that resonates and I am so appreciative of you just taking the time, because hopefully we can, even if it's tiny drop in the ocean, but at the end of this research make some recommendations who do create these ads on how they could be a little bit more sensitive to the whole of population really.

A: Well I think it's really important research, obviously I am here doing it because I don't think that – I think and you probably have the same experience, but eating disorders are so stigmatised I think and it's like there is so many things that go around it and you are just constantly told through marketing that you're not good enough I guess. So I think that if we can make advertisements better I think it's important.

Q: Yeah fingers crossed we can have some influence but I wouldn't be able to at all if you didn't volunteer, so thank you so much. Just to confirm-

(Recorder switched off)

Interview 2

(Recorder switched on)
Image 1

Q: So we'll start with the images. I'll just share screen with you and confirm that you are able, so are you able to see that there?

A: Yeah.

Q: Beautiful and I'll just zoom in on this like a little bit. So this is the first image, it's a real-life campaign and I guess the first question I wanted to ask is have you ever seen this image or campaign before?

A: No, I haven't.

Q: No, okay and do you think say if this was in Australia or in Melbourne or wherever you might be that if you saw it you would notice it?

A: Yeah, I think I'd definitely notice it.

Q: Yeah, why do you think you would notice it?

A: I guess like having I guess an increased awareness of you know, things involving food and weight and that kind of thing. These kind of campaigns are quite I guess eye-catching to me at least, yeah.

Q: Yeah, … and do you think – so when – I know you've just recently been *[removed for confidentiality]* but maybe this has been going on for some time, do you think before this was something that you were experiencing that you still would have noticed it or it's heightened now because of what's happening?

A: I think it's probably heightened after the diagnosis because before then I guess I was less aware of what was, like the thought processes and things. I think I still would have noticed it but I wouldn't have noticed that I was noticing it if that makes sense.

Q: Yeah, it does. And also having said that you think you would notice it, what is your initial reaction to it? When I first showed you this how did you feel or any emotions that are brought up?

A: I guess a lot of like, I guess the association between like the particular type of food and cancer in particular is quite challenging. Like for me yeah, I, like I *[removed for confidentiality]*, I know that obesity is a risk factor for cancer, but I think the association in the imaging like using the fries and stuff in particular you know, it creates that link between fries and cancer. Whereas you know, it's that, they don't necessarily need to have that negative link. So for me, yeah I keep recalling all the times that I have had hot chips and then feel guilty for that, whereas you know, I, if they're not necessarily making me obese. But yeah I guess that kind of secondary message is quite challenging.

Q: Can you talk a little bit more about those feelings of guilt that might come up?

A: Yeah, so something that was quite prevalent in my eating disorder in particular was when people targeted specific foods. Often times like the things that I cut out were quite irrational and didn't make sense like I'd eat ice cream in a period of time where I just wouldn't let myself eat nuts because someone told me that they were really calorie dense. So I guess with this in particular you're creating a link between cancer and the chips that are in the box not necessarily only between obesity and cancer. So automatically you associate chips with something bad apart from the fact you know, that they're carb dense, etcetera, etcetera, but you know there's this extra reason for you not to be eating these things.

Q: Yeah, so would you say then in there there's some things that you dislike about the campaign? You can say if there's something you like, but I get the feeling perhaps there's not, but if there is go for it. But any things in particular that you would say you dislike about that?

A: Well I think the message in general is okay like they're definitely, like obesity definitely is linked with cancer, but I just, for me the use of food in particular yeah, is challenging. Yeah.

Q: Yeah, no that's-

A: I'm not hugely against it. It's just-

Q: Okay, interesting yeah.

A: Yeah, I guess it provides an extra excuse to justify you know, giving up X, Y, Z, in this case the hot chips.

Q: Yeah, so what do you think it's trying to achieve then this campaign in particular?

A: I think this campaign you know, it provides people who might be overweight or obese a reason for that and something that they can change as well. And I think that's why they've used the food is because if it just said oh yeah, obesity is the next greatest cause after cancer, after smoking, then they'd be like oh yeah, sure. Whereas you know, that link means that there's kind of an action that can be done. So whereas a smoker might be cutting down on cigarettes, the obese person is cutting down on hot chips. Yeah, but I think unnecessarily it tells everyone to cut down on hot chips.

Q: Yep, that's a really interesting point and I guess in relation to your health condition, so separated from the fact that you are a *[removed for confidentiality]* and things like that and probably have quite a bit of education around that, how do you think that that affects your understanding of what is in front of you or how you perceive it in relation to the diagnosis that you have?

A: Well I mean in the community we see like cigarettes are looked down upon a lot and antismoking campaigns are quite I guess targeted and aggressive and linking a type of food or food in general to that kind of narrative yeah, I think that's the biggest thing. You know, you look at a packet of cigarettes and I guess with my condition in particular you might feel a similar way about food and certainly I do about … foods and this kind of reinforces that.

Q: Okay, and what about others, how do you think that they would respond to it? Maybe not with a similar past or background you have, how do you think a rich person would respond to this? You know, that's a tough one but maybe-

A: Yeah, I guess the average person probably wouldn't be too affected because they'll, they'd see the word obesity and go oh well that's not necessarily me. If they're not obese or something like that or if they're normal weight they'd go oh yeah, that campaign doesn't apply to me and kind of ignore it and continue with the day. But I guess the concern is that people who are vulnerable to eating disorders or in their early stages can use it as fuel I guess to develop that even further. You know, like in the same way that I would have used my parents telling me that nuts are energy dense or something like that.

Q: Yeah, certainly and you think, so there's some similarities there you think, but do you think there are differences in the way that you would perceive it in the general or average person?

A: I think so just because of the heightened I guess attention and obsession with food and literally just like any kind of reason to avoid something in particular or seeing something as negative would just result in me … (Unable to understand) again.

Q: Yeah, so do you, would you have any suggestions for improvement on something like this then?

A: I guess yeah, it's quite difficult to come up with a proper suggestion. I guess the biggest issue for me is just the link of the particular food with obesity and thus, cancer and smoking and that kind of negative approach. Like as someone who's trying to reintroduce these kinds of foods that are quite difficult for me, this kind of goes against the … (Unable to understand). So maybe I guess with the imaging of it, not necessarily the overarching message if that makes sense?

Q: Yeah.

A: I'm not really sure in particular what could be improved.

Image 2

Q: No, that's okay. That's a great answer, thank you so much. So we'll move onto the second one now, there's four in total. I'm going to ask you similar questions around that. So the second one it's another campaign. It's an Australian, no American one this one. Have you seen this before?

A: No, I haven't.

Q: No, okay and do you think similar to the last question, do you think that you would notice this if it was-

A: Yeah, probably yeah.

Q: For those same reasons?

A: I think this one is probably even more noticeable. I think yeah, that the imaging is a lot stronger and more colourful as well like more eye-catching in general. But apart from that a lot of people with eating disorders, myself included, struggle with things like that like liquid calories and stuff. I'm sure you're aware. Yeah, so that might stand out a little bit more.

Q: Sure, what was your initial response when I showed this one?

A: I think it was a little bit more negative simply because that, it kind of puts a lot of the background thought processes into an image. Like you know, the idea that I have in terms of drinking soft drinks, juices, that kind of thing is that you know, you're kind of gaining fat without noticing it whereas like you eat food, you feel full, etcetera, etcetera. So I think that it really kind of makes it, that kind of thought tangible. So I guess yeah, I don't know how to-

Q: So … - no, that's great. So this one's a little bit more sensitive for you because of that as you said which is common in people with eating disorders. But because of that idea of liquid calories or quote unquote empty calories, the food or drink choice in this case has affected your perception?

A: Yeah, and definitely the connection between the drink itself and I assume that's like fat … (Talking over each other)-

Q: I think that … (Talking over each other) yeah. What do you think about that?

A: I think it definitely, it sounds stupid but demonises soft drink quite strongly. It evokes a response … the intention of any advertising campaign, so.

Q: Yeah, what do you think this one in particular is trying to achieve?

A: I guess increasing the awareness of something that you know, people with eating disorders see, think about all the time I guess, but often I guess the general population probably wouldn't think about the calories in the juice that they're having every day or with breakfast, etcetera. Like I used to drink juice with breakfast every morning and didn't think twice about it as something that just improved my meal. So yeah, I think yeah, it – I don't know where I was going.

Q: No, that's okay. That's fine and what if it was a different, if it wasn't a drink, it was food instead?

A: I guess it would be-

Q: Oh cute.

A: I guess it would be I guess like I think it would evoke probably less of a negative response in myself-

Q: Okay, yeah.

A: If it was food, but-

Q: Sure.

A: Not too sure.

Q: Yeah.

A: I think the biggest issue for me with this particular image is the fact that the person in the picture is already quite thin and seems quite healthy and yeah. I guess if you're struggling with body image and might be even a little bit larger than this person but not necessarily overweight or at risk of anything yeah, I think it would be quite difficult to see.

Q: Yeah, well that actually leads in perfectly into the next question I was going to ask you which how do you think others would perceive it and you've said from your perspective having the eating disorder and the liquid component of it, but the everyday person you've just touched on it then, it would still be quite hard to see. Is it for those reasons in particular or?

A: Yeah, well I think the ad and using the model that they did means that a large portion of the population are I guess bigger than that person. And the fact that they're saying that her drinking the soft drink is bad makes that even more monumental for someone who is larger than her. The fact that she's drinking herself fat by drinking the soda like what would that look like to someone who is of a larger weight but not necessarily again at risk of the things that they're trying to prevent.

Q: Yeah, oh my gosh, I love your cat.

A: … sorry.

Q: Don't apologise, that's the best. They're so funny, aren't they? And just the last question on this campaign in particular, same as the last one, would you have any improvements that you would recommend in regards to the things that you have just spoken about and its impact?

A: I think they could really de-sensationalise it like I think it's quite extremely, the use of the words don't drink yourself fat you know, it could just be like the rethink your drink I think is something positive. They could use a different or more, I guess a model who resembles I guess more of the public in terms of the size and things like that as well. Because I don't know, I know that particularly I guess people with eating disorders see themselves as bigger than they are because of that body dysmorphia, but in the general population seeing someone who's quite thin being I guess the target of an anti-fat campaign is quite like you know, it attacks a lot of people in a way.

Image 3

Q: Yeah, lovely. Thank you so much, it's really good feedback on that one. I'll move to the third one now which is a little bit of a different approach. So this is the third campaign, have you seen this one before?

A: Yeah, I have.

Q: Okay, so it's familiar to you?

A: Yeah.

Q: And just again you've already seen it but I guess that answers the question of would you notice it in your day-to-day life? Again is this one that even before your diagnosis you feel you would have noticed or?

A: Yeah, I think I saw this, I was doing a community run thing, we have *[removed for confidentiality]* here in … and yeah, they used this like this campaign was quite involved in the merchandise and stuff for it.

Q: Sure, okay yeah and what's your, how do you feel about it?

A: I think I prefer this campaign to the other ones, at least like I obviously have a contextual understanding behind the image of what the campaign stood for and stuff and I think it's a lot more positive and I guess constructive. As someone who's recovering from an eating disorder I think one of the strongest things is you know, the black and white kind of approach like you either have to eat all of the bad food or none of it. Whereas I think this particular campaign is more constructive in you know, you can make, you can eat ice cream if it, less of it. You know, it doesn't demonise particular types of food …, it's more about moderation and stuff like that which I think is a bit better.

Q: Yeah, and so that's the text, what about, did you notice the images at all, so the tape measure and then-

A: Yeah.

Q: Yeah.

A: Yeah, so tape measure I guess again like is quite challenging and I guess any association with size and you know, balloons and I think that that is difficult to see. Like the message is better than the other ones but I think again the imaging and the direct correlation between body size and health is one of the things that comes through in this campaign which is less ideal, but you know.

Q: Can you explain that a bit more? So you, the direct association between body size and health which is something, I mean I know what you're saying because I you know, I know this field too, but can you elaborate that a little bit more and actually verbalise what you mean exactly by that?

A: Yeah, well I guess within the general population and also within the imaging used in this, I think the association between you know, if you are a bigger person you're more likely to be unhealthy which is generally the case statistically. But some people I guess and what I'm trying to learn myself is that you know, you can be bigger but still you know, exercising, eating well and that kind of thing. Whereas the use of the balloon and the use of the tape measure directly link health to a particular size and that size is always usually smaller than what you are. And as I'm recovering from an eating disorder you know, it, that kind of thought perspective kept pushing me to a smaller size and to a point that wasn't necessarily any less unhealthy than being obese.

Q: Yeah, that really good perspective and insight I think, so thank you again for sharing that. And I guess you, I, you've said it, but explicitly what do you think this campaign is aiming to achieve?

A: Yeah, so the campaign is I think in a more moderate away again aiming to reduce obesity in the public or you know, stop people from gaining weight which is a big issue in Australia I guess. And

but I think they take a more moderate approach than the other ones you know. They're not saying you know, don't do this, don't drink juice or don't do X, Y, Z, it's more like do it less which I think is a bit more positive than some of the other ones.

Q: Yeah, and do you think that's just your own interpretation or how do you think others would respond to this?

A: I think it might be more so my interpretation but again I think it's a lot, I'm going to say friendlier in its approach. So yeah, I don't know. I guess in that way people can use it to justify certain things you know, like I, instead of eating a tub of ice cream today I ate like two scoops. You know, that kind of thing.

Q: Sure.

A: But regardless yeah, I think it would evoke less of a negative response even in the general person.

Q: Yeah, wonderful and what about improvements for this one here?

A: I think in general the tape measure is kind of, I don't know if it really adds anything to the campaign. So yeah, I mean I don't think it's, like they could literally just replace that with a normal exclamation mark.

Q: Do you think that would be better?

A: Yeah, I think so. I think it just doesn't reinforce that idea that size equals health or lack thereof whereas the tape measure directly insinuates that.

Q: Yeah, and what about the balloon …?

A: Yeah, again like literally it could, I don't think the fact that it's a balloon guy adds a lot to the messaging. So I mean yeah, I'm not hugely affected by the imaging in this ad. Like it's not great, but it's not awful either, so.

Image 4

Q: What about this next one then? This … (Inaudible) up to, yeah we've got one more, so this is the final campaign. So a warning, it is quite graphic. Have you seen this one before?

A: I think I have.

Q: Yeah.

A: Yeah.

Q: And is this one that you would notice?

A: Yes.

Q: Yeah, what's your initial response or feelings and emotions about this one that comes up?

A: Yeah, I guess I do not like this one, yeah. I don't know, I guess the general aversion is the big thing you know, like I definitely don't want fat outside let alone inside, etcetera. Yeah, I guess it's my initial response and again, the use of the live lighter slogan is yeah, not ideal.

Q: Why?

A: Because as someone who I guess … a long time to live lighter and has experienced the negative impacts of that like again, it's, it might be a useful direction to be heading if you are overweight, but you know, general population or someone who is healthy in the size that they are in would just generally feel quite targeted by it. I don't know, that's just my, … (Unable to understand) the general person would, but you know. If you're doing all that you can, exercising 30 minutes every day and eating a healthy diet I can imagine and still having you know, a grabbable gut or whatever that is which I think most people would kind of have yeah, I think you know, you feel guilty already even though there's not necessarily anything that you might be able to do.

Q: Yeah, so you, so that word comes up again then, guilt. Is that something that it brings about for you by viewing this or are there other adjectives that come to mind when you see this?

A: I think when I see this it reinforces a lot of the messages that my mental illness set like you know, reduce your risk by eating less and moving more every day. That was something that I dedicated myself to you know and as someone who is trying to recover or even within the illness itself, that kind of is counterproductive to challenging those thoughts. It goes oh, well that's a health campaign you know, they're telling people to be healthier by eating less, by moving more and that's literally what I'm doing you know. And even though I might not have the grabbable gut now like that, what would happen if I ate more or moved less, would I end up in that situation? I think in the general population it would be a lot less pronounced, yeah I think.

Q: Yeah, do you think - I'm interested in what you said just there. Do you think there's part of it that is stronger because it is a health campaign message?

A: I think the fact that it's like a - if it was some kind of dodgy Instagram page or something like that you'd be a little bit more like yeah, they're probably pushing a little bit far. Whereas the fact that this is a health campaign and … linked to diseases rather than you know, it's easier to go oh I like my thought processes aren't quite practical or realistic because it's about an idealistic body image versus oh they're not realistic but this campaign is telling me I'm … specific diseases. I don't know, I think the fact it is coming from a reputable source is, yeah.

Q: So improvements on this one, would you have any?

A: I think yeah, the direct link of again like with the previous ad, the link between the outside external grabbable gut and toxic fat I don't think is necessarily always realistic. And yeah, again it really demonises something to do with body size and image, something that you can see with lack of health. Whereas you could easily have a thinner person who's experiencing or at risk of heart disease or a larger person who's completely apart from their objective like BMI, isn't at risk of this illness. So

again I, it's a message that's important across a population scale, I just think in those individual people and in a community that is, dedicates too much of themselves to again eating less and moving more, I think that association between the outside and the inside is quite yeah, not an ideal. I don't know how to improve that in particular. Again, it could just be making it more of a positive thing and images such as you know, moving more and eating healthier. And then associating that with a generally better lifestyle avoiding things like cancer etcetera, or heart disease and type 2 diabetes rather than this particularly negative association. But then on the other hand, practically and objectively I know that these kinds of associations are probably more likely to be successful on a population level, so.

Q: Well that's the thing I was going to ask you about as you said on a … population level and considering the fact that these are broadcasted on a whole of population level, is there any concerns or commentary you had around that fact that there's no limitation in who sees this?

A: Yeah, I think I have – I think you can't really blame the person who came up with the strategy or the people who promoted it and spent money on disseminating it. I think that generally the intention is good and I think the net effect in terms of you know, weight loss, creating awareness amongst people who might not be aware is good but I don't think it takes into consideration the impact on the individuals who already consider these things to I guess a normal level. So people who are just living healthy lifestyles and then people who consider it to a pathological level and really reinforcing what becomes kind of a irrational thought process and fixation on eating less and moving.

Overall

Q: Yeah, wonderful. Thank you. So those questions were related to the images in particular. Now I'd just like to ask you if it's okay that just a few more questions about all of them overall.

A: Yeah.

Q: And the … and things. So I guess considering all of these four, what are your overall thoughts and feelings about these campaigns in general?

A: I guess in general campaigns like against certain foods or I guess obesity in general have been I guess ways to, that kept me in denial during in particular like pre-diagnosis. So I was probably … eating disorder *[removed for confidentiality]* before it kind of got to the point where I was admitted to hospital and things like that, so literally I was someone who kept denying the fact that these thoughts were becoming irrational, etcetera. And then seeing this messaging in the media, seeing anti-obesity campaigns and I guess the messages even just growing up that you know, get fed to parents and then down to children about eating healthy and you know, not having dessert every night, etcetera can predispose and justify some of the thoughts that I had as normal behaviour. So you know, if I was skipping a meal I'd go oh well this person didn't have dinner, or this person did this and I think like anti-obesity campaigns play a role in that kind of justification of some of the behaviours that do become I guess out of proportion in eating disorders. So I guess it's easy for me to be angry or frustrated with the I guess the diet culture of society that's reinforced by these kinds of messages and blame them for the issues. And I know that in some ways they did contribute but then they also play a role. So I'm kind of, I get the to and fro between someone who's an eating disorder patient trying to

get better versus a *[removed for confidentiality]* who wants the general health of the population improve …, yeah.

Q: Do you see any differences between these campaigns?

A: Yeah, I think it's, the swap it one is more positive because it doesn't I guess have that immediate negative - like this one's quite confronting, the drinking fat one is quite confronting as well whereas I think the other one, like they're more, I guess the swap it one is more lifestyle focused. Or at least like that, that comes from having the content because of the rest of the campaign so I don't know if that's an unfair advantage for that one in particular. But yeah, I guess when you focus on the behaviours as not - like I think the negative part of that campaign is the size association. But removing that imagery when you're focusing on it as a general health improvement rather than this fat equals this disease, I think that's a bit better. I don't know if that makes sense.

Q: It does, 100% it does. You've been very eloquent, so thank you. And I guess before we wrap up and just debrief, is there anything that you'd like to add; anything I haven't asked you or any comments or anything around these?

A: Not in particular. I guess yeah, it's certainly I think I've mentioned a few times, it's that association between size and weight …. And in an obese population who aren't already thinking about it, that can be an effective way to try and encourage those weight loss behaviours potentially. But yeah again, in a group of people who are vulnerable or already experiencing an eating disorder, it does really reinforce those fixations and I guess that's kind of seen across the different campaigns and stuff, yeah.

Q: Beautiful, thank you. So I'll stop sharing the images now, that's enough of those.

(Recorder switched off)

Interview 3

(Recorder switched on)
Image 1

Q: Okay, cool. So, I'll show … (Inaudible) the first image now. Can I just confirm for me – see that okay – I know you're on your phone, so.

A: Yes.

Q: Beautiful. Okay, have you seen this campaign before?

A: No.

Q: No, okay. Do you think this is something that you would notice in your everyday life if it was locally, in Melbourne, or wherever you're located?

A: Probably. I wouldn't be surprised if I saw that, considering a lot of like, smoking and obesity campaigns I've seen around.

Q: Yep. And what do you think your initial response was to this campaign when I first showed you, and this can be in terms of any feelings or emotions it might have brought up for you?

A: It's a bit strange. I'll be honest, it does look a bit weird. It's comparing, I guess, obesity to smoking and cancer, but it's – I don't know, it's weird, it's a weird scene, like cigarettes – no, sorry, fries instead of cigarettes. Sorry, I'm just trying to get my head around it.

Q: No, no, that's perfect. Take your time.

A: It's just a bit weird to kind of compare fries to cigarettes.

Q: In what way-?

A: Because obesity is a lot more complex than just eating fries. You know, there's a lot of genetic things that goes into it, culture, environment, and just to kind of make it out like one fry is like one cigarette, it seems a bit over the top, but a bit harmful as well.

Q: Yeah, harmful in which ways, can I ask?

A: It kind of encourages this idea that like, food can be as bad as cigarettes, which isn't the case.

Q: Yep. Wonderful. So, I was going to ask whether you like or dislike the campaign, and I get the feeling it's probably more negative emotions, so-

A: Yeah.

Q: Could you maybe describe in particular what is it that you don't like, or is it exactly what you just said, the comparison that it makes?

A: Yeah, what I said, like that kind of association, because obesity isn't just about junk food. Obviously, excessive use of junk food can be a part of it, but just associating it with just that, specifically will make people think, like oh, if I have some fries, that's as bad as smoking a cigarette, and that's just not true.

Q: Yep. So, what do you think they are trying to achieve then with this campaign?

A: I guess, sort of promoting that junk food isn't good for you and can lead to obesity, which is partially correct in a way, it makes sense, but it just kind of – I guess it sort of pushes this idea that food is the enemy, like it looks so much scary, like you think of cigarettes, and like most people, it doesn't provoke happy emotions, and when you associate that with fries it's kind of like, it seem like a negative thing.

Q: Yep. And in relation to your diagnosis, so previous and current, or wherever you are in your journey of disordered eating, how do you think this effects your perceptions of this image and campaign in particular?

A: It's uncomfortable. It just pushes the idea that a lot of people like me feel that food is the enemy, like it's this dangerous thing that can hurt you, and obviously, that's not true, but that's how we feel and this kind of provokes that unhealthy idea that we deal with.

Q: Yeah. And then how do you think other people who are perhaps not diagnosed with an eating disorder might view this … (Inaudible) similarities, or perhaps differences, or?

A: It's like a slippery slope. It starts promoting that idea in their heads, especially for younger people that are more susceptible, it kind of puts that idea in their minds that like, hi, like you should associate this as being bad, and that just can kind of like over time fester and then become an eating disorder.

Q: Yeah. So, you see, there's concern there or there is that feeling that it could perhaps lead to … (Inaudible) even in people not currently diagnosed but the risk of that?

A: One hundred percent. It's a slippery slope and it kind of pushes this negative idea to have a bad relationship with food.

Q: Beautiful … (Inaudible). Then having said all of that and the impact that you've just described, what improvements if any, do you think could be made to a campaign or advertisement, such as this one?

A: Well less of a focus on just the food, because obesity is a lot more complex than that.

Q: Yep.

A: Maybe instead of the fries, they could just keep the cigarettes instead, maybe like write words of the different things that contribute to obesity. So, things like your DNA, your environment, the culture you grew up on, just having less of a focus on just food and having that I guess … (Inaudible) the slogan for obesity.

Q: Yep, wonderful. Okay, thank you. Let's move onto the second one. So, I have three more to show you, and I'll be asking-

A: Cool.

Q: Same or similar questions and we'll just keep exploring those responses. So, the second one here, and I'll just minimise that so you can see that for me. Is that alright?

A: Yeah.

Image 2

Q: So, this is the second image, and you can take some time to have a look at that one. Is this something that you've seen before?

A: No.

Q: No, again. What's your initial response there? I can hear something in your voice-

A: That's crazy. Oh, my gosh.

Q: Yep, in what way?

A: Okay, first of all, she's very skinny. So, that's – not that she … (Inaudible) skinny, but like when you see that … and a campaign telling you to not drink yourself fat and that already probably makes you feel like, not good about yourself. The fat down her mouth looks like vomit, and that's not for me, triggering, but I can see that as being king of triggering because it's like … (Laughing).

Q: Yeah, sure.

A: The message is to choose water, and I get that soda's not great for you, it's not great for your body, but that's very graphic.

Q: Yeah, uncomfortably so?

A: Yeah, like I wouldn't feel comfortable for like kids seeing that, just like on the street, considering she's got all this vomit looking stuff just drooling down her mouth.

Q: And what about the messaging itself?

A: So, I agree with the idea that you should promote that soda isn't great for you, but again, they're kind of just focusing on the specific thing about fat. Like soda's not good for many reasons. You can get a lot of digestive problems with excessive soda that has nothing to do with fat or weight. So, again it's just focusing on this one thing when there's other ways they could have gone about it, promoting – you know, drinking water over soda, because water is obviously better for you, but this

way it just kind of feels like you shouldn't drink soda because it'll make you fat, not because it will eat your insides.

Q: Yeah, and are there any other adjectives that come to mind, I guess, like that was quite a strong response and I'm just wondering if there are any other descriptors that you had that you kind of felt then when you saw that besides the shock value of it?

A: Sorry, let me think.

Q: Yeah, that's okay, take your time.

A: It's very in your face. Sorry … (Inaudible)-

Q: No, that's okay-

A: It's in your face. It's-

Q: Well what about how it makes you feel from the perspective of the diagnosis that you have and the experiences that you have had with an eating disorder, how does that make you feel, something like this?

A: Kind of gross, to be honest, not just for me, but for other people seeing it, how they might feel.

Q: How do you think they might feel?

A: I guess they might – like it'll – you know, any time, say, they're like out to a restaurant or having dinner, I worry that they might feel like any time they go to pick up a soda that it's just going to make them full of all this fat, when everything is good in moderation, and again it starts those kind of like unhealthy habits and thinking of everything as like an amount of fat you may or may not have in your body.

Q: And do you think it affects you personally?

A: Yeah, it does make me feel kind of gross.

Q: Sorry.

A: No, don't be sorry. No, it's fine. If it was not fine, I'd tell you, but it's just kind of like, it's just the fact that the fat looks like vomit dripping down their face, that's a bit like intense, but I think that would be for most people, regardless of their diagnosis … (Inaudible) or not, like to most people that looks gross to look at.

Q: Sure.

A: And I feel like that's not really an effective way to campaign something that's meant to be positive about drinking water.

Q: Yep. What do you think would be a positive way? I know this is a tough question, but-

A: No, that's all good.

Q: Yeah. Would you- … (Talking over each other) someone with your experiences and knowing what this can, what you've said that you think this could do to people viewing it, what do you think we could suggest or put forward?

A: Yeah. I think it could go kind of one or two ways. One, they could be kind of focusing on all the dangers of excessive use of soda, so the weight, and kind of like fuck with your digestive system … (Inaudible) with that kind of stuff, not just focusing on the … (Microphone interference) like that's kind of like a downward spiral that a lot of people get. The second one would also, just be focusing on the effects of constant drinking of water, so not kind of focusing on like, don't drink this, drink this, but just like, hey, these are the benefits of having water as your main beverage of choice over having anything else … coffee and stuff, drink tea, anything like that.

Q: Yep. Great. Any other comments on that one in particular?

A: Yes, it's strange that they look happy. It looks kind of creepy, I'll be honest, that they're like smiling as they're drinking … (Inaudible) and I know it's kind of like a sex sells sort of thing, like it's a woman with her mouth open in an ad, like that's not a shock, it's very common. Yeah, it's kind of got this weird like sex appeal to it while she's drinking a pound of fat, so I think it kind of gives a view these kind of mixed emotions that like, this is kind of gross, but she's hot.

Q: Yep. That's a really interesting point I hadn't – really, it's funny, I'm asking people questions about these, and then they give responses that I haven't thought about. I'm like, oh- … (Laughing) things like that, but that's such a good point. So, I think we'll move onto the next one and I'll get this out of your face.

A: Yeah, you're fine, don't be- … (Laughing).

Image 3

Q: This is the third one. Is this-?

A: What's that about?

Q: More familiar with, or have seen?

A: No. What is this?

Q: Sure, so you can have a look at that. It's a "swap it don't stop it" campaign.

A: I'm so confused. What does this mean?

Q: Yep, so it was created to encourage people to make healthy swaps. So, it might be from a perceived bad food to a healthier food or something like that. So, make the swap but don't completely stop the behaviour or the consumption, things like that.

A: I like that. I think, specifically the don't stop it, that's very, very important, because a lot of people when they think of like, regardless of whether … (Inaudible) with anything or not, but they think of losing weight and they think, I have to not eat this, I have to not eat during these hours of the day, or this meal, or whatever. But swap it don't drop it might sound like you can if you want, if you want to change the way your body looks, you can change some foods for other foods that will, I guess nourish your body from the inside. The use of the measuring tape, that's very important because that's something that we all see a lot, myself included.

Q: Yeah. What do you think about that being there?

A: Well the fact that it – I mean, okay it can be kind of good and bad, to be honest. The measuring tape kind of goes from like thicker to thinner, obviously that's subconsciously representing like, you know your measurement is going from larger to a smaller one, which could be triggering to the foods that have – you know, they're kind of used to like measuring their body a lot. It could also be seen as a positive thing, like hey, like I can be smaller without starving myself. But again, it could just focus on size and measurements rather than how you feel in your body.

Q: Yep. And what do you think – can you elaborate that more, so putting that focus on size and measurements, what do you think that means or what might that do?

A: It puts value on the wrong things, it puts value on a number and a measurement rather than – like one of my friends, *[removed for confidentiality]* and she rarely uses like scale measurements, anything … (Inaudible) she uses her clients is how they feel in their bodies, how they feel in their clothes, how much energy they have, and I think when it comes to talking about weight loss … (Inaudible) anything like that, the focus should be more on how you feel in your body, like how energetic, maybe you can now walk five miles instead of one, rather than a size and a number.

Q: Yep. And anything to comment about the other image there, that blue balloon there?

A: It's weird, it's like this chubby man.

Q: Yeah … (Inaudible).

A: It's obviously – it's like it's calling fat people balloons. It seems a bit weird, it seems a bit mean. Maybe I don't like this one as much as I thought … (Laughing). Actually, no, it does seem a bit mean to – yeah, like you're overweight, you're a balloon, and that's … (Microphone interference) bigger people get all the time, so that's kind of mean.

Q: Do you think it was intentional at all, or they just have gone with the balloon character and?

A: I'd say it was intentional, because if you look at the arms and legs, they kind of, I think, look like rolls, because it's a balloon. So, I think – I think if they used a stick figure it might not have had the kind of shock value that most advertisement places go for, so … (Background noise) the advertisement.

Q: Yep. Then what do you think they are trying to achieve with this?

A: I guess to sort of promote kind of healthy eating, saying that you can get healthier, again when it's your waistline, lose weight … (Inaudible) in the fridge you use every day, but again, there is a focus on fat and rolls, and like being a balloon, rather than your blood tests for one, how you feel, that kind of stuff.

Q: Yep. So, sort of from your interpretation of it, from your perspective, how do you think someone else might view it, not with your perspective, or anything that they might take on, or how they might perceive it?

A: I mean anyone who is bigger might feel a little upset at the balloon person and the exclamation mark going from fat to skinny, because they might just feel like, oh, I'm a balloon.

Q: Yep.

A: It might be seen as positive for people who are just trying to get fit and lose weight, who might be diet restricting or intermittent fasting, stuff like that, they might think like, oh, like maybe I should try this, maybe I should try just swapping my food out for healthy alternatives instead of just cutting out meals altogether. So, it could go either way for this one.

Q: Yeah. And what would you suggest then, maybe to help it go the better way?

A: I would get rid of – I would change the balloon. I would just, if you're going to put a person there, just put like, a stick figure or like, just not at all. I would get rid of the measurement exclamation mark, and instead – oh, I don't know, maybe have like two plates, one being more unhealthy and maybe it's like, just like a plate or like a McDonald's meal, and the other plate maybe having a healthy equivalent like a home made burger and some home made fries, rather than pushing the idea that, oh, you can't have healthy tasting food, like well why don't you just like, instead of going out, buying a Big Mac meal, make yourself a burger and fries at home, it's much healthier and it has more nutrients in it.

Q: I think that's a great suggestion, and that might actually help with interpretation as well, because you had said, I haven't seen this before and actually had no idea what it was saying.

A: Yep.

Q: Do you think, perhaps if it did have reference to food or something, it would be much clearer?

A: Yeah, one hundred percent. Because I'm like, swap what?

Q: Yeah, yep, okay, interesting. A really interesting point. Let's jump onto the fourth. So, a little warning, this one is graphic again.

A: That's okay.

Image 4

Q: This is our last one in the series of these. I'll just … (Inaudible).

A: Ooh, … (Inaudible) the smoking ads, actually when you see the eyes and the mouth and stuff … (Laughing).

Q: Yeah. Have you seen this one in particular before, or?

A: No, I feel like I've seen no advertisements, I'm sorry.

Q: Don't apologise, no, no, that's just part of it. Right, so having not seen it before, do you think it's something that you would notice?

A: Oh, one hundred percent, I mean like one, obviously the person grabbing their belly, like that's in your face, but even more so, obviously seeing the inside, you don't often see the insides of body parts on advertisements, because it's not usually advertiser friendly, so that's, obviously very eye grabbing.

Q: And how does that make you feel when I first scrolled down to this one and you saw it?

A: That's very hateful, I'll be honest.

Q: Very hateful, was it?

A: Yeah, it's just – it just sounds really mean, like a grabbable gut, as in, like even – honestly, even my skinniest friends can grab their butt and - grab their gut – and then have some kind of like squish to hold because that's just the way your stomach works. And then placing toxic and fat together, that's really dangerous.

Q: In what way?

A: Negative association that your fat inside is toxic and you need to get it out of you when there is such a thing as like healthy fat. So, like we all have fat in our body, no matter how fit we are, just because it's a natural substance in your body. But associating it with the word toxic and adding that graphic image it's just going to make people want to stuff themselves, to be honest.

Q: Yep-

A: It just makes people think, like oh, no, I can't, I don't want to put this in my body. Look at my gut, it's so big, it's so gross.

Q: Yep. And you think there are harms from that?

A: Definitely, especially people who are bigger and who might not already feel great about themselves to see that. First of all, it's just a bit embarrassing to show someone's stomach upfront and their hands squishing it and seeing how big it is. You know, many people are going to look at

that and have a stomach that looks exactly like that, and to then be told that the fat inside themselves is toxic, that's just going to make them feel bad about themselves.

Q: So, that's people who are overweight or who – you know, do you – haven't felt like this – what about people in your position, people who are suffering from eating disorders, what do you think … (Inaudible)?

A: Even if you don't look exactly like this, even if you have some kind of negative relationship with your body or food, to hear the words toxic fat is very dangerous, because it – what's the word – it pushes the idea that the fat inside you is toxic, it's a negative things and it needs to get out of you.

Q: So, what does that mean if you're feeling that way?

A: It makes you not want to eat; do you know what I mean, it would make you maybe want to throw it up. Maybe you just saw this having a meal and you're just like, oh, no, like I can't even think of all that fat inside of me, I need to get it out. And again, it just promotes very toxic ideas. Like there's other things you could talk about when it comes to obesity and I guess weight problems that don't always use the word fat or specifically focus on food.

Q: Yep. I'd like to just go back to that comment that you said about behaviours, behaviours … (Background noise) inside.

A: Yep.

Q: Do you think that is something that could happen for you on seeing something like this?

A: Possibly, definitely. I mean it's triggering whenever I see anything that like, maybe people are making fun of people's bodies and calling them fat, like it's always when you have what I have, it's always the fear that people will see you like fat with your grabbable gut and see it as like a negative thing, and to have your body associated with the word toxic, that's just kind of like a very self-loathing kind of word to have in your mind because it makes you not to like yourself.

Q: Yep. So, knowing that this is projected on a full population level, how does that make you feel … (Background noise) exclusive to only some people, anyone is exposed to this, and that was on TV, on bus stations and things like that?

A: I'd see most people would feel bad. If they didn't feel grossed out about it, because you know some people are very … (Inaudible) like they don't like seeing blood or guts or anything like that, if they didn't feel grossed out by that, then they would at least feel like a little bit shitty about themselves because they'd look down at their stomach and be like, is that what my insides look like? Well, how disgusting. Like my body is so gross, I can't believe it.

Q: Yep.

A: And for kids as well, because like, kids shouldn't grow up thinking, they like, have a bit of a belly which everyone does, including children, we all have bellies, that it's something toxic. See, toxic is a very – it's a very – what's the word – like a powerful, another word for powerful but I can't remember – a powerful word to use, it's very intense. It's like the worst form of bad, toxic.

Q: Yep. And were you – I don't suppose you were looking for the word jarring, or?

A: Jarring, yeah, no, that should be it.

Q: Yeah … (Inaudible). So, you're finally on this one. Any suggestions for improvement, or?

A: So, let me see. Alright, so – sorry, I'm just reading the bottom bit of it, so – type 2 diabetes and cancer by eating … (Inaudible) – okay, eating less, that's a problem. Get rid of that. It assumes that everyone is just eating mountains and mountains of food every day, which I mean you can have a regular diet and still be obese, there's a lot that goes into it. I do understand … (Microphone interference) showing like the body and what it looks like, so I guess the stomach, so I'd keep that maybe, but get rid of toxic fat, that's very dangerous. Get rid of the photo of the outside of the person's body. You can show the insides if you want, maybe show the clogged arteries and stuff and be like, hey, these are some of … (Microphone interference) outcomes of obesity. Healthy eating, exercise, consulting your doctor would be the main one. I'm considering there's lots of factors that go into it. But yeah, definitely get rid of toxic fat. Get rid of the photo of the person's stomach, because like everyone at some point in their life has held their stomach like that and been like, I hate this. And just to see it on a poster, it's wild.

Q: Yep. … (Background noise) the interview … (Inaudible) images. Now I just want to ask you some questions-

A: Oh, sorry, my – dropping out – what did you say?

Q: No, no, it's okay, I just said they're all the images that I want to show you. Are you okay at the moment-?

A: I'm cool.

Q: Yep, so-

A: I'm okay … (Inaudible).

Overall

Q: Yeah, okay, there's just a few more questions in relation to all of them. So, I guess this strategy as a whole and how they are presented and where you might find them, or how you feel after seeing them. So, just a general question about what are your overall thoughts and feelings about the campaigns that you've seen today?

A: Yep.

Q: Yeah, what does that bring up, or?

A: I guess it's a little bit of fear for younger people for them to see that and have those ideas instilled in them from very early on, to have a negative association with food, to feel like that is toxic, and rather than to take care of their health and love themselves, that's one of them, so fear for them. Yeah, I think jarring, the word you said before, that's – because it's a bit intense, hey, like seeing these things on advertisements. Like I feel myself, that's not normal, but seeing it kind of plastered on an ad and kind of pushing those ideas to other people, when I personally wouldn't wish it upon anyone, I wouldn't want anyone to feel that way about themselves, so it's a bit harsh for like those kind of, I guess ideas that a lot of us have is being used as advertisements, even if it is for healthy eating, I think they've just gone about it the wrong way.

Q: I'm interested, because from what I'm hearing, at least, you're more concerned for others, perhaps than you are yourself, so even despite what you're going through and perhaps a heightened sensitivity to this, you are more concerned about the impact it might have on others. Is that a fair thing to say, or you're just-?

A: Yeah, I'd say that, because yeah, it's a terrible thing to go through and I think a lot of people go through it because of, I guess advertisements like these and these things we see in media and movies every day that promote these like unhealthy relationships and unhealthy habits that can just kind of like fester and grow into what it is.

Q: Yep. Did you see any differences within these campaigns?

A: Yeah, some were going from different angles, obviously some were going for more shock value, others were just kind of more going towards like this is the message, even if I didn't agree with this message. In terms of like, they all kind of have a kind of similar message though that it's a focus on fat and food as a way to combat obesity, which again is harmful because it doesn't give all of the information about the food, and yeah, some of the words are very charged, using words like toxic and having the woman drinking the fat out of the water bottle, so a lot of shock factor, but I also think that the advertisers … (Inaudible) like they're trying to get you to kind of like notice and think about it, and then have their advertisement in your head, even if it does have the wrong impact.

Q: Yep. And finally, before I sort of go through a bit of a debrief, was there anything else that I haven't asked or anything else you wanted to say, or comments, or anything about these that maybe I haven't covered?

A: Let me think. No, I think it's, I think covered everything.

(Recorder switched off)

Interview 4

(Recorder switched on)
Image 1

A: This year.

Q: Oh good for you. Alright so what I'm going to do now is I'll get the first image up, I'm going to show you 4 images and I'll ask you the same question for each of those. So I'll just share screen, and let me know how you're going, if you can see that, so can you see that one there?

A: Yeah I can see that.

Q: Beautiful, okay so the first question I'll ask is have you seen this before?

A: No I haven't seen this one before.

Q: No sure, and do you think that you would notice it?

A: Yeah I think so.

Q: Yeah definitely, and why do you think you'd notice it?

A: I think the image is quite striking and the, especially the word obesity. Yeah and then the wording is quite dramatic, and yeah I think I'd definitely, I'd see obesity and see the chips and then I'd read the bottom part, yeah I definitely would notice that.

Q: Sure, so when I first got this one up, what was your initial response?

A: I think, yeah I think I've seen, trying to think, yeah I think it was very striking, like it's quite, yeah it's very, like the word obesity I see it immediately, and then the chip packet as well. And so yeah I think it, it's quite like fear inducing I think, the kind of message that they're trying to get across.

Q: Yeah, fear inducing personally for you or just in general?

A: I think perhaps a few years ago it would have been fear inducing for me, now I think I'm able to like look at it and kind of separate myself I guess from the word obese, but I think it still plays into, like at the moment it still plays into the fear of putting on weight and the fear of losing control and becoming obese or overweight.

Q: Yeah so other than fear, does it bring up any other feelings or emotions or anything for you personally?

A: I think, yeah like probably fear and worry I'd say, yeah.

Q: Yeah and what about the comparison that it's making between the different health conditions, so obesity and comparing it to cancer, does that, do you feel any particular way or-?

A: I think, yeah the same there where it's, you know like afraid and worried, I don't know it's something that's kind of, yeah it's something, when yeah I think, yeah just kind of the fear and worry that like cancer can happen if you become overweight, and it's similar to smoking, I think that's the kind of reaction I get from that.

Q: Yeah so then in terms of any likes or dislikes of the campaign, would you be able to talk me through those, if there's anything you like or particular things that you do dislike about it?

A: I think, I don't really like health campaigns particularly like this because as I said, like a few years ago this would have been something that like I would have seen the word obesity and kind of been very scared and associated it with myself, and I just don't think that this kind of, these kind of campaigns are quite blamatory and they don't, like they blame the person quite a lot and don't really focus on the social economic factors of obesity, they just kind of focus on obese people eat chips, obese people eat a lot. So I think, I'm not a huge fan of these kind of advertisements.

Q: Yep and do you think that has been more since your diagnosis in dealing with this, or that you're more understanding of it, or you've always kind of felt this way towards them?

A: Yeah I think it's a bit of, like having to educate myself after my diagnosis, and the course that I also do, cos we've had to kind of study things like this at times, but yeah I think perhaps if you asked me 5 years ago I would have said that these are probably, I would have liked them a bit, I would have said they were probably a bit more helpful than I think they are now. But yeah it's definitely something that's taken me a long time to be able to look at and not associate with myself or realise that they're not particularly good messages.

Q: Sure and what about how other people interpret them, how do you think that might differ from you?

A: Well when I see these kind of things I think about people who actually are obese or are overweight, and I just think that these kind of messages are quite, they're like meant to invoke fear in people and they, I just think that a lot of people are obese not because they eat lots of chips or because they pig out all the time. So I feel like people, this would worry people and kind of make people, I don't know sometimes people can't really help if they're obese or they, there's not much they can do, so I just think that people would see this and feel really down on themselves.

Q: Yeah and any idea of, or anything that you think, further implications of that would be on these people?

A: Yeah I think a lot of the time people will like do either, I think either they, you know take extreme measures to try and lose weight that aren't particularly going to work, or they're going to do the opposite and be like well what's the point, I'm already obese and kind of not really have any healthy lifestyle changes. I just don't think these kind of messages are going to force people to go out and do health, create healthy habits.

Q: Yeah so what would be a suggestion for improvement then for something like this do you think, from your perspective?

A: I think, yeah it's, it'd be really difficult cos I do, at the same time I get what they're trying to do with obesity, I think, yeah I'm not quite sure what they could do. I think it's hard to, I get what they're trying to do with like the public health and they're trying to do what they did for the smoking, a lot of the smoking campaigns, but I think that there's, with obesity there's so many more socio economic factors that are associated with it than smoking. So I think perhaps if they could focus more on those factors, I'm not sure how they would do it in like such a clean advertisement format, but I think yeah not really, not necessarily focusing on the food and focusing on other factors that might affect obesity. Or like perhaps advertising, I don't know like vegetables and saying eat more vegetables rather than don't eat this, like saying things they can include to create healthy habits rather than saying that chips are bad.

Q: Sure, yeah great feedback, thank you so much. So that's the first one, I think we'll move onto the second one now, I'm just asking you some similar questions about each of them. Alright so this is the second image, you can see that okay?

A: Yeah.

Image 2

Q: Okay beautiful, have you seen this before?

A: No I haven't seen this one, I think I've seen the rethink your drink, I've seen some of their advertisements but I haven't seen this one.

Q: Okay and do you think you would notice this one in particular?

A: Yeah I definitely would notice this one, yeah.

Q: Yeah why do you think?

A: I think the word fat definitely is something that I don't, like I would see and be like fearful or a bit triggering.

Q: Sure.

A: I think the image of, yeah the soda turning into fat is also really like gruesome, so I think that's something that I would notice as well and would, yeah definitely would play on my mind.

Q: Can you elaborate a little bit more; it seems the main thing for you here is the word fat and then the visual of fat. What is so confronting about that for you?

A: Yeah I think particularly, like fat is one of those food groups that I found really hard to eat, or like was something that I would cut out a lot and really avoid. And so I think yeah the visual image of that fat is like a bit gross for me, like I feel like it's something, like I'm put off by it. But then also the word fat, like I think when, I think they've probably written it here to talk about it as like you know the constituent of food, but when you see it you kind of think more of the body image part of it, and

like called someone fat, like I guess that's probably what they're trying to, like it's a bit of a double thing. But yeah that's, and seeing the word fat when you've associated it with yourself for so long I think, or like it's been such a fear word for so long, I think yeah it's not great.

Q: Yeah thank you. And so your initial response centres around that, is there anything else that you notice besides that, the fat aspect of it?

A: I think after a while I do see like the choose your water instead, and the rethink your drink, I do also notice that the model is quite slim as well, but yeah those are the main things I notice.

Q: Yeah okay, so sorry when I'm looking down I'm just looking at some questions, I'm not just distracted or anything. So you've already spoken about what you kind of dislike about the campaign in particular, was there anything else besides the use of fat?

A: I think just, yeah I think the way that it's harnessing fear to everyone and it, I think there's a lot of people who are going to see this necessarily, like some drinks aren't great but like not everyone needs to cut them out, and they're okay to have a treat sometimes. So I think just the way that this advert …, yeah it's structured for everyone to see it and I don't know, everyone to, I don't know, everyone's kind of going to associate themselves with it somehow, I think that's, yeah I don't really enjoy that part of it.

Q: Yeah and what about, you commented on the model, is that a like or dislike thing or anything else to say about that?

A: I'd say that, what I initially saw and I probably disliked it, I think, I don't know just, I'm not quite sure why, I think it, cos when I think about it, if they were to put a fat person I would also not like that at all-

Q: Sure.

A: It would be kind of stereotypical, I feel like it's targeting a certain group.

Q: Sure.

A: But I think, yeah I'm not quite sure how I feel about it, I would say I don't like it but I'm not sure why.

Q: That's okay, that's fine. And what do you think exactly it's trying to achieve; I think you've touched on it but just summarising that?

A: Yeah I think the trying to create like fear, like someone to see it and be like oh you know, I shouldn't have a soda tonight because I don't want to get fat, it looks a bit, makes her look a bit gluttonous as well, like she's, I don't know, like she's drinking too much, she's yeah overdoing it. And so I think they're just trying to target people and remind them that even soft drinks can create fat within your body, but yeah I think they're just trying to make it really jarring so people remember it.

Q: Yeah, how do you think others would respond to this as opposed to you have, in similar ways or differently?

A: I think perhaps the word fat wouldn't trigger other people as much as me if I saw it. I think the way that she's drinking, the fat would, a lot of people would find that pretty gruesome, or yeah pretty striking. Yeah I think people would perhaps have a more neutral reaction than I did, but again if someone was obese and was to see this, I feel like it would, I don't know, probably be a bit more triggering, like a bit, I don't know, it would reflect they're trying, I don't know, I just can't imagine like what it would be if they had to, I don't know see this and associate themselves with like gluttony I guess, so yeah they probably … as well.

Q: Do you think it would be helpful in any way?

A: I think it, it's one of those ones where perhaps it could, I think if someone sees it and doesn't necessarily, I don't know, it's like it's one of those things where it's probably, it could be educational to some people, … I feel like it's not a hugely well-known thing about drinking soda can cause fat as well. It's, yeah it's one of those things that some people aren't really aware of, and something like this is quite striking and makes people aware, but at the same time I feel like there's perhaps better ways to do it than to, yeah fear monger.

Q: What would those better ways be? Do you have any suggestions or you just know that there is?

A: Yeah I feel like, I don't have any like particular suggestions, but I don't, it's hard because again this one is, cos it's an advertisement it's one that you can walk past and easily take …. But I feel like something a bit more educational would, I don't know, be a bit less triggering for people, if they, you know explained why, cos I think if someone just saw this and saw like sugar equals fat, they're going to have that, they're going to have that in their brain, like a correlation in their brain for a while which can be quite damaging, so I just think perhaps a bit more explanation or you know, not using like a really gluttonous image would perhaps work better just to make it a bit less like blaming of people being overweight and obese.

Image 3

Q: Yeah wonderful, thank you, we'll move onto the third one now. So this is the third image, have you seen this one before?

A: No I don't think, the slogan does sound familiar but yeah I haven't seen this.

Q: Do you think you'd notice it?

A: Probably in passing, not as much as the other ones, yeah I don't think I'd notice it as much as the other ones, but-

Q: Why do you think that is?

A: I think it's not using as apparent imaging, like it's, I think the other ones I've like, yeah I could see, I don't know like the fat and the, yeah the imagery was a lot more striking and made to, for people to

notice it and have a reaction to it, whereas this one just looks a bit more like a slogan, like more just like advertising, it could be … doesn't, not necessarily look like a public health statement.

Q: What's your initial response then, having only just seen this one now?

A: Yeah I think pretty neutral; I don't really have any response to it really. I think, yeah I see, I think the only thing that's indicative that it is like a health message is the tape measure, but I don't really have any, much … to say about this one when I see it.

Q: Yep. What about the tape measure though, you've just brought that up-

A: Yeah.

Q: What do you think about them using that exclamation mark there?

A: Yeah I think, when I see the measuring tape I do think of waist circumference or measuring yourselves, like even weight and things, but yeah I think that's, yeah that's why I associate it with health and with weight loss, but I think that's perhaps the only thing I noticed.

Q: What do you think they're trying to achieve?

A: I think they're trying to, they seem like they're trying to create like a health message that isn't necessarily, like the other ones, like it doesn't, it's not blaming people and it doesn't have negative connotations, saying that you can swap things out rather than stop them altogether and cutting everything out from your diet, but yeah I think that's what they're trying to say.

Q: Yeah and any commentary on the imagery besides the slogan?

A: I think the … man looks quite neutral to me, I think there's not much that sticks out about it, yeah probably just the tape measure was the only thing that I really noticed, yeah.

Q: And do you like it or dislike it or-?

A: I think I do like this one, I think yeah perhaps with some more context it would be a good advertisement. I think I do, yeah I get why they would use the other advertisements though because they're more likely to be noticed, cos I think this one is one that you could just pass by and not really notice too much.

Q: Sure, and do you think others would have a similar reaction to you with this one?

A: Yeah I think so, I feel like I might even notice it more than other people, just because of what I study I think, I'd see it and think about it and like you know be able to bring it up in a, like some sort of essay or talk to my friends about it, but yeah I'd say I probably notice it more purely just cos of what I'm studying.

Q: Yep wonderful, and any suggestions on improvement for this one?

A: I'd say it probably needs a bit more context, like more information, but … it would probably go in conjunction with something if it was to be used as an advertisement.

Image 4

Q: Sure, alright thanks *[removed for confidentiality]*, let's get onto the fourth one, so this is the last one. Okay you can see that can you?

A: Yes I can see this one.

Q: Yeah sure, alright. Have you seen it before?

A: Yeah I've seen this one.

Q: What's your initial reaction?

A: I think definitely goes towards the imagery of the inside, like the visceral fat, it's very gruesome, very noticeable, yeah I think that's definitely where my eyes immediately go, yeah it's really gross.

Q: Yeah and what about feelings or emotions that it might bring up?

A: I think definitely the same thing with like the fear and the worry that that could be me, like that could, I don't know, I feel like the grab-able gut, I feel like everybody has like a bit of fat on their stomach, and I think I would associate that with myself. So yeah definitely worry and a bit scared of that and you know getting, putting on weight.

Q: Sure, so with the other one that I showed you, you said more so a few years ago it would have, sorry the first one I'm talking about with the chip packet, but how about this one, what you just explained is that current feelings as well?

A: I think this one's probably a bit, I think 5 years ago I definitely would have had like a, like I would have been a lot more scared and a lot more worried, but this one I think is still something that I like am a bit worried about, like I am a bit more worried than like when I see the chip packet, yeah that kind of imagery. But when I see this, like when I see the grab-able gut, I don't know, like I associate it, I still like, I feel like everybody's got like a bit that they can grab on their stomach, and I think that kind of thing would scare me. And I still, I think my, at first I would associate it with myself and be like oh I shouldn't put on weight, and then I think I'd think it through and you know use what I've learnt over the past 4 years to be able to break it down. But I think it's still something that I see and I'm like oh I really shouldn't put on weight even though I still need to, but yeah.

Q: So how does that make you feel then, than you seeing this image and the way you relate it back to yourself and your behaviours, and your history I guess with struggling with issues like this?

A: I think, sorry could you say that question again?

Q: Yeah I guess just wanting your perspective then, you've said kind of what it does to you and the fear, and makes you think that you shouldn't put on weight even though you've identified that you

still need to. So just delving further into that, how does that make you feel, you identified earlier that these things are generally shown to everyone, and you're right, they are in a population base scale, so I was just wondering if there was anything that, any particular emotions that it made you feel or anything like that?

A: Yeah I think definitely like, yeah scared and worried cos I think, I don't know I would yeah definitely, if I were to see that I think that would associate, you know I'd see the fat and I would get a bit worried that I shouldn't put on weight. And I think, yeah I just think I would try and, I don't know something that might stick with me for a bit and make me a bit more aware when I'm eating and be in my head. I think especially 5 years ago I do remember hearing these ads on the radio, like it's something that's definitely stuck with me and yeah that I've definitely been afraid of. And yeah the fact that everyone's hearing it, I just don't think everyone necessarily needs to relate, but they've structured it in a way that most people, you know most people will be like oh I have, I can grab my gut, maybe I need to lose weight or not put on weight.

Q: What do you think, I'm interested in what you think they're trying to achieve, you've said that … (Unable to understand) of fear and scare and things, do you think that's what they're trying to achieve or what do you think …-?

A: I think so, I think these ones are particularly modelled on the cigarette advertisements what we've had the past 20 years, and it's been really successful with cigarettes. But I think they are trying to invoke that fear of fat the same extent that they want people to be scared of cigarettes and what they can do to them. I just, yeah I just don't particularly feel like they're the same thing, but I think yeah they're trying to educate people on what can happen if you become overweight and obese, and I guess you know what it looks like on the inside and that does affect you on the inside, and trying to do it in a way that's quite striking so people remember it.

Q: And do you think your reaction and feelings be similar to, well I'll call them the everyday person or someone not in your position?

A: I don't think people would have as, yeah as a huge reaction as I would. I think that a lot of people who haven't, who don't have what I have are able to kind of see that and separate it from themselves, like if they are, you know if someone who was the exact same BMI as me were to see it and they didn't have *[removed for confidentiality]*, I think they'd be okay with, you know just be like oh I'm not obese and being able to move on. But I think people who have my condition, like even though verging on like underweight rather than, like nowhere near being overweight or obese at all, are still, would see that and be a bit scared cos they still kind of associate themselves with that even though there's, even though that's not true.

Q: What do you think of that use of scare and fear in ads like this?

A: Yeah I think, I don't think I really approve of it. I don't think even the audience that they're targeting should have to be afraid of food or eating, I think it's a very like natural thing. I think they should be focusing on more productive ways that people can create healthy lifestyle change rather than shocking them into action, I don't think that is necessarily going to work. I think, I don't think shaming people, especially when it comes to weight is something that is going to be effective at all.

Q: What do you do think, what, wait, what do you do think, what do you think would be effective, sorry (Laughing)-?

A: I think perhaps like actual educational things like telling people what they should be eating, reminding people that they need to eat vegetables and that certain, you know even like the sugary drinks and the discretionary foods aren't necessarily healthier for them, I think something like that is a bit more instructive and something like this is a bit more, is a lot more harmful, and yeah definitely is designed to shame people into wanting to do something about their weight. But yeah I think I'd prefer to see some actual constructive advertisements for people.

Overall

Q: Sure, wonderful, thank you for that feedback too. And I guess what I wanted to do now was just debrief a little bit further on the purpose of the research, and then ask for any more general comments. So my whole PhD is looking at the influence of public health campaigns on risk factors for disorder eating. So, and there's been lots of research into things like interventions, weight loss interventions, even social media, but less focus on stuff like this that's put out by official health bodies or government organisations that have been less analysed and criticised I think. So I wanted to see if this is influencing people in a negative way that I kind of thought it might be. So that's why I wanted to speak to you, a population group such as yourself who could provide those sorts of insights and how you feel when you do see things like this. So I guess wrapping it up in all 4 of them, is there any other comments I guess about your overall thoughts and feelings about them as a whole?

A: Yeah I think particularly, or at the end of, I think may, oh actually it was the first semester last year I did an essay on the *[removed for confidentiality]* actually.

Q: Oh wow, yep.

A: I think, and that was something that I noticed as well, is that I think in a, they, a lot of them were just focused on who it was targeting and if those people … wasn't, there wasn't any, I couldn't find anything on like you know the risks of what it was, which I think is, that's, yeah someone coming from a group like myself, something that, I don't know, I thought was interesting that they didn't have anything like that. So yeah I think-

Q: Yes.

A: … research, so yeah that's pretty much it. I think that, I just don't, just of the thought that they, I don't think they're very helpful and I think they're quite damaging to some people, but yeah that's my opinion on that.

Q: Yeah thank you. And I guess, you touched on I think the third one, the Swap it Don't Stop it campaign, that you noticed a difference between that one and the others-

A: Yeah.

Q: Do you notice a difference between those 3 besides the Swap it Don't Stop it, or you think they're all along a similar line or-?

A: I think the Live Lighter one's definitely, I think they would be like the highest in my opinion of like shock value and triggering eating disorder people. I think the other 2 were still, even though they were jarring, they weren't as jarring or as, yeah … they, I feel like they were a bit easier to separate from the eating disorder mindset or my particular eating disorder mindset, but yeah I think the last one definitely is the one that was the most noticeable.

Q: Thank you; I'll stop … that now so you don't decide to …-

(Recorder switched off)

Interview 5

(Recorder switched on)
Image 1

Q: You can see them. So the first ones going to pop up straight away, is that visible to you?

A: Yeah, I can see that.

Q: Great, so I'll just zoom in a bit more. Wonderful, so just the first question I have is have you ever seen this campaign before?

A: No, I haven't.

Q: No, okay. If it was advertised – this one is not actually in Australia, but do you think if it was advertised here and you're in *[removed for confidentiality]* are you?

A: Yeah.

Q: Yeah, so in *[removed for confidentiality]*, in your local area, do you think it's something that you would notice?

A: I think so, it's not too colourful or anything, but I think it still would catch people's attention.

Q: For what reasons do you think?

A: I guess always I feel like smoking would always catch someone's attention, just like the pack, the smoking pack is probably what caught my attention the most.

Q: And then did it change at all, your attention as you kind of got to-

A: Yeah, I guess once you read, you really have to read into this one, I guess it's not like when you first see it it doesn't, nothing really stands out right away, but then once you read into it then you can sort of realise what it's trying to say.

Q: What do you think it is trying to say?

A: Let me just have a look. It's trying to say that obesity is the biggest preventable cause of cancer after smoking; so it's just trying to say that if you're obese you're at a really high risk of getting cancer.

Q: And what do you think about that, the way they've gone about conveying that message?

A: I don't know if it's the best way to convey, I mean it only sort of shows a couple of chips which is kind of like not the biggest – everyone's allowed a couple of chips in a while, it's not really hitting me in the face that I should cut back or try and lose weight just to not get cancer. I feel like it's not really convincing me too much. It's good, but I feel like I've seen better things that are a little bit more like scary and I really should lose weight to avoid these things; so that's just my opinion.

Q: But this one doesn't really do that for you?

A: No, it doesn't really actually.

Q: So you feel it doesn't bother you in any way or does it bring up any sensitive feelings or emotions or things or-?

A: Doesn't really actually, no.

Q: Okay, that's fine. Is there anything that you particularly dislike about it or like about it?

A: It's quite simple, it's just there's not too much going on in the picture apart from the writing, that's definitely the hardest part of the ad, just reading what it says on the box. But yeah, I like that it's simple, but I dislike that it doesn't stand out right away what it's trying to say I guess.

Q: So you've said how you responded to it and that it didn't really do much for you or instil any fear or anything like that; do you think it would affect others differently or how do you think others would respond to the campaign? I know that's hard, so it's just a guess really.

A: Well I think smoking is seen as something that's just terrible and especially when you see the box a lot of people would be like no way, you can't touch a cigarette, that's going to cause so much damage; but I guess when people see chips and food they don't immediately think to correlate it to cancer. So I think it's sort of just opening up people's minds that if you do eat a lot or eat a lot of the wrong foods that it can be almost just as bad for you as smoking which I feel like people might not realise; so I think it's effective from that perspective.

Q: And do you agree with it or-?

A: I think so, it's not something that I often think about actually, but yeah I don't really know much about obesity and cancer, but yeah it seems about right, I would believe it.

Q: Sorry if you can hear that.

A: Oh no, I can't so it's fine.

Q: I adopted a greyhound yesterday.

A: Oh, really; gorgeous.

Q: And he's … but he's usually silent, this is the first time he's made noise of course right now, but I think …-

A: You're so lucky. That's alright, I've been looking at adopting a dog too, so I'm very jealous of you.

Q: You should do it, it's been great … I do apologise.

A: No, no that's fine.

Q: But this is my final question about this image, would you have any suggestions for improvement about this campaign?

A: I feel like as I said, it didn't immediately – I had to read it in order to understand what they were trying to get at; so I guess if someone just passed by in the street it might not really get what its trying to say right away and might not pay too much attention and not really get the message. So I feel like maybe making it a little bit more obvious as to what it means might be better.

Q: Thank you, beautiful. So I'm going to ask you pretty much exactly the same stuff for the next three, but we'll just go off your responses really, so the way I'm asking is semi-structured, I have some prompts but then you can feel free to take it in any direction you want as you have as well; so try not to make it too repetitive for you.

A: That's fine.

Image 2

Q: I'll just zoom out, so this is the second campaign. Have you seen this one before?

A: No, I haven't either.

Q: No, okay. Do you think you would notice it if it was in your day to day world, wherever you travel?

A: I think so, it stands out and there's not a lot going on like I said on the other one, so it's way easier just to read and notice what's going on in the picture.

Q: How does it make you feel looking at this one?

A: Again, it seems a bit like it's almost like they've got this really nice slender girl drinking soda and then they're trying to say that it's a bad thing which is just a bit interesting. It's kind of correlating the bad thing with this beautiful person, so it's almost like going back at what it's saying; it's saying don't drink yourself fat, but the girl that's drinking is lovely. I don't know, that's just my opinion of it.

Q: Yeah, so they want your opinions. Do you think – so you've said that it's sort of ironic I suppose.

A: Yeah, exactly; it is ironic.

Q: Do you think there's something wrong with that or you think there's nothing wrong, it's just an observation; is there any meaning behind that for you?

A: I guess – I don't know, it's more just looking at it I guess having someone like that really doesn't instil that message in of drinking water instead when she's having the soda and having no problem

with it; so yeah, I just – I don't know, again it's not really too convincing of me to stop drinking soft drink when the person drinking the soft drink doesn't look unhealthy or fat at all.

Q: Okay. So if you view this do you relate it back to yourself in any way?

A: I think so, well I guess I do believe what they're saying in that water is a lot healthier than soft drinks and I will choose water over soft drinks, so it is persuading me to do what its saying; but the picture just doesn't seem to match what the words say in my opinion.

Q: Do you think it has any effect on you, I mean you said it reaffirms because you would choose water …-

A: Yeah.

Q: Do you think it has any effect on you in any way?

A: I think it would definitely encourage me to choose water instead of maybe treating myself to a soft drink or I don't know, a hot chocolate or a coffee later down the line because that's what they're telling me to do even though someone of my background I totally could have any drink I want. But yeah, these sorts of ads definitely encourage me to choose the healthier option or the low calorie option I think coming from my background.

Q: So let's delve into that a bit more, you say coming from your background, what do you mean by that?

A: I guess with anorexia or an eating disorder like that, that we're encouraged to have things with I don't know, more sustenance or have full fat milk and have I don't know, a soft drink instead of something else just to boost up what we're eating and the nutrition and things like that. And if something like this is telling me to drink water it goes well why should I have the full cream milk or whatever if they're telling me to have water; I should just choose water and do what I'm still doing if that makes sense.

Q: Yes, so-

A: So it sort of encourages me to do the wrong thing if that makes sense.

Q: … if you think about that then, if you were to see this and it's encouraging you to do those things that from what I'm hearing is you're saying is it the health professionals that are treating you or something?

A: Yeah, correct; so health professionals would tell me to have the high calorie or the higher protein or whatever option instead of just water and this ad sort of – well you see it and you think these people are also of a place to inform you that water is better; so it's almost encouraging me to go against health professional advice and choose water instead because the people who made this ad should be coming from a pretty well informed background as well. So yeah, that's how I would-

Q: So it reinforces that for you?

A: Yeah, it sort of prompts you to do the wrong thing I guess for someone like me.

Q: Can I just ask you are you still *[removed for confidentiality]*?

A: Yes, I am.

Q: As an *[removed for confidentiality]*?

A: Yeah, I've never been hospitalised or anything for it; but yeah, I still see a dietician and a psychologist and things like that.

Q: Perfect, good to know; just making sure. Just for the purpose of the study I chose not to go with inpatients just because I didn't want to be too invasive in hospital, so I was just checking that you are an *[removed for confidentiality]* and I still would've done the interview and things, but just checking what treatment you are getting.

A: Yeah.

Q: It's good to hear that you're still getting those things. Right, so that's a really interesting perspective on that one. So you're saying for you, for your condition it kind of reaffirms to go against the advice that you're getting.

A: Yeah.

Q: What about for someone who doesn't have your condition, do you think that others would interpret it in the same way or a different way?

A: Again, I feel like if you were trying to – an average person trying to choose between soda and water, I still don't know unless they're with – to have this really healthy looking girl seeming to really enjoy this soda, it's kind of really not convincing me to choose water instead; it's honestly more selling the soda than water, so I feel like there might be a more effective way of trying to convince me not to drink soft drink.

Q: Sure, what would be a more effective way then?

A: I know there was that ad I've seen a couple of times when it's the one that's – I don't know, it's a bit different, it's not really linked too – I think it was linked to obesity actually with the cancer and it was a video of a surgeon doing something on a patient who had been drinking a lot of soft drink. I can't remember exactly the details, but I've seen the video quite a lot; but I guess just seeing that surgery and seeing the cancer and stuff that came from the obesity which was a product of drinking too much soft drink, that it really made you rethink what you're doing because if you stick to that path that could be where you end up. Whereas just seeing someone really healthy and really looking like they have a good time, that doesn't really convince me to drink water; whereas seeing someone who's in a much more critical condition really makes me think more about my choices I feel.

Q: Does the image here have any aspirational qualities for you at all or it's purely just you think it's a conflicting message and that's as far as you look into it?

A: Yeah, I guess I don't know, I don't really – do you mind just repeating that question, sorry?

Q: Yeah, that's okay. So you mentioned the model a few times and I just wondered if there's any aspirational qualities about the image for you or you purely just look at it from almost a judgmental perspective in saying that doesn't make sense and it's just the message that's conflicting or is there anything about the model that appeals to you?

A: I think the rethink your drink thing in the corner is quite good because it just gets the message across that you should think about your choices when choosing between drinks and that one is a lot healthier and better for you than the other and that makes it very obvious. And I like the simplicity of it, as soon as I read the first – it literally takes me five seconds to realise what they're trying to say. So the first, that little top section is great and then the picture, it doesn't really seem to go.

Q: … the language used, it's just the image?

A: The language used is good, yeah I think it's really easy to understand and quite easy to just get the message really fast. I just think maybe the image underneath may not be the best choice.

Q: Thank you. So we'll move on from that one to image three, a little bit different this one.

A: Oh, yeah.

Image 3

Q: You've said oh yeah, is this one you recognise?

A: Yeah, no I recognise this one.

Q: And what's your initial reaction to this?

A: So obviously there's the nice balloon man, so I guess at first he seems a bit friendly, but he is looking a little bit on the bigger side, he's got a big tummy and the swap it don't stop it, I like that slogan because you can still have the same quality of life and have things that you like doing, you don't have to completely stop what you enjoy and what you're doing altogether; so I feel like it's a little bit more motivating for people to lose weight.

Q: Okay, so motivating for people to lose weight as in the general public or everyone or from your perspective in particular?

A: I think this could apply to most people, even just choosing between – I guess it's similar to the other one, like choosing between healthier options or things like that. I feel like everyone could put it into their day to day life; obviously obese people more so, but I feel like everyone could learn a little bit from this advertisement and rethink what snacks they have or what meals they have and just change things to a more healthy option I feel.

Q: And what about the balloon man, you spoke about he does look a little bit more on the overweight side, do you think that means anything or-?

A: I think it just targets it more towards people of that weight, but doesn't sort of – I don't know, it's a bit more of a friendly way to show someone that may be overweight I feel.

Q: And how about you, how does it make you feel or how to you relate this to yourself if you do at all?

A: I guess I could relate it to myself, I guess someone in my position doesn't really need to swap much at all or if I am I'm swapping it to something that's bigger or probably less healthy more than healthier; but yeah, I think it's good, I don't think it has the same – it doesn't make me want to go against what I've been told to do, I just feel like it's a more of a friendly ad and it doesn't make me feel – it doesn't scare me into swapping things myself and going back to a pattern that I have been in for a while. I don't know, something about that ad doesn't make me want to go straight back to my bad habits. I don't know, I like that it's a bit more friendly. I don't know, something about that makes it less making me want to go back into eating habits that I had, if that makes sense. Sorry, I'm having a bit of trouble working this.

Q: No, that's fine and you're doing really well and this is really great insight. I wondered if there's anything else about it that you notice besides the man?

A: I guess that's probably a tape measure on the side, so I guess-

Q: …-

A: Yeah, I think it is. So I guess that's probably more in relation to the losing weight part, but yeah again a subtle thing that is I don't know, there.

Q: Does that tape measure – are there any implications of that for yourself particularly coming from your own perspective and experiences?

A: Not really; I feel like – I was very obsessed with my weight and not really – a tape measure I associate more with a waist measurement or something like that, whereas I was more fixated on what was showing up on the scales. So again, that doesn't really correlate to what I've been really obsessed with in the past.

Q: Yeah, makes sense. And overall what do you think – and you've sort of inexplicitly said it, that this is trying to achieve really?

A: I think it's just trying to encourage people to choose healthier food options in their day to day lives and that they can still enjoy their food and enjoy their meals and enjoy their snacks, but just swapping maybe more unhealthy options for something a bit more healthy and nutritious I feel. So they can still enjoy all the food they're eating, just eating something a bit healthier.

Q: So would you have any suggestions for improvement on this one at all?

A: Not really, I quite like it actually. I think it's good.

Q: You're happy?

A: Yeah, I'm happy.

Q: And I think I might've not asked you that about the previous one, just going back, correct me if I did ask you, but were there any recommendations for this one?

A: Maybe just swapping – this girl just looks like she's having the time of her life drinking soft drink and is almost selling me soft drink if I wasn't reading the words on the top. So maybe having something a little bit – maybe have an overweight person there instead of someone who looks very healthy, it might convey the point a bit more.

Q: Okay, thank you.

A: That's okay.

Q: And let's move onto the fourth image, I have a feeling it might be what you were referring to earlier, but I could be wrong; so let's have a look at this one.

Image 4

A: Oh, yeah.

Q: Similar to-

A: Yeah, I think very similar.

Q: Have you seen this poster in particular?

A: No, I haven't.

Q: No, but you've seen the similar campaigns that have gone round and the video version maybe?

A: Mm hm.

Q: Okay, what's your initial reaction having a look at this?

A: It's pretty scary seeing what's inside of that person and seeing the word toxic, it really makes me get scared of getting obese and I think that's a pretty obvious thing and a really scary sort of thing that scares me into wanting to lose weight if I was an obese person.

Q: Would you notice this in your day to day life do you think?

A: I think it definitely catches your attention having that bottom picture is not – it's kind of a bit disgusting, so it definitely catches your attention.

Q: Let's go back to that, you used the word scary-

A: Mm hm.

Q: What do you mean by that for yourself personally, why is that scary?

A: I don't want to have toxic fat inside of me and have all of that sitting inside of me waiting to cause all these health issues for me like heart disease and type 2 diabetes like it says down the bottom; that's definitely not what I want to happen to me. So yeah, I think I don't want to become obese because I don't want that to happen to me.

Q: Do you think it's just you or it would be everyone that would-

A: Everyone would not want that to happen to them; none of those health conditions are fun and they really impact your life and how you live your life. So I feel like that's a good ad for everyone to either lose weight or think about their choices to make sure that doesn't happen to them.

Q: So what about – it seems to me you kind of went straight to the bottom half of that, what about the top half of it, was any attention drawn to that?

A: I guess that's what correlates the – if you just saw the bottom picture you wouldn't automatically associate it with someone a bit obese, but I think the top picture just implies to me that they're talking about this sort of thing happens with obese people.

Q: And what about the image and the motion of the grabbing the – they've called it a gut?

A: Yeah, it's not really the nicest way of portraying someone that might be obese; it's pretty confronting and I feel like if I were obese and I saw that photo it's not necessarily the nicest photo. I don't know, I feel like it might be a little bit offensive to someone that was obese.

Q: And what about – you're not in that category, does it have any affects on you or you're only concerned about how an overweight person might perceive it; what about you and your condition?

A: I feel like with my condition I'm so far away from being someone like that, so it doesn't really – like the previous ones may have prompted me – again, this one is just so far away from anything that I am at the moment, I've never had a gut like that and I hope I never will. So I guess it's sort of something that I don't automatically associate it with someone like me. I guess I still take notice, but it's not something that I'm particularly worried about or anything that will prompt to go in the wrong direction in regard to my disorder.

Q: So you don't think it would?

A: No, I don't think so; it's showing someone that's way different to what I am. Yeah, that's just so not me, I'm not even close; so I guess that it's definitely not me, I don't think that this is associated with me and where I am at the moment.

Q: So you said that it was scary, is that purely from the internal perspective, there's no part of it about the top half of the grabbing the stomach; it's purely that toxic insides that you're worried about, nothing in the outside look?

A: I guess I don't want to end up like that person either; both are bad to me; I don't want to have that gut and I don't want to have toxic fat. I would rather not have both of those, but I guess just the bottom picture is just a bit more eye catching to me than the top one.

Q: I'm going to prompt a bit further, so I don't want to have either of those, why do you think that is?

A: Well I don't want to be obese or overweight, so I don't want to have a stomach like that, so that's why I don't want to be like that person.

Q: Okay and so you don't want these things, but upon viewing this you don't believe that is encouraging the behaviours relating to your eating disorder …-?

A: I don't think so because it's not really talking about food or healthier choices necessarily, it's just saying if you are overweight this is what you have inside of you and this is what it's going to cause. Because it's not talking about food related things and choices, it's not as related to my background; so I feel like why I'm not pairing the two together.

Q: Okay, so you would be more sensitive to something that showed food and limiting food or that?

A: Exactly; if there was something that said you've got to healthier or you've got to not eat this and only do this, in terms of food I feel like oh cool, I'll do that because that's what's related to my condition. But it literally doesn't mention food and it just shows someone overweight, that's not as related to my background and my concerns I guess.

Q: Sure. What about others when they see this, you said that if someone who's overweight that this would be quite offensive; is there anything that you think – doesn't even have to be someone overweight, but for the general population how they would perceive this at all?

A: I feel like it would sort of convey to the general population that if you were to get overweight this is what could happen to you; so I guess it would just encourage them to maybe eat healthier and exercise and things like that to make sure they don't go down that path and end up like the person in the top picture.

Q: And finally, any suggestions for improvement for this campaign or this image in particular, the poster?

A: I quite like it; I think it catches your eye right away and lets you read into what's going on; so I really like that it catches your attention like that. And I think it's saying this is what can happen and this is how you fix it is a good idea just down the bottom there; so yeah, I think it's quite a good ad.

Q: Okay, beautiful. So those are the four images, are you all good to-?

A: Yeah, I'm all good.

Overall

Q: Okay, cool. So the final thing we're going to do is I just have some questions overall about all of them and then we can wrap up with a little bit of a debrief and things. So I guess the first question I have is – and it's a very broad one, so take this where you choose or whatever comes to mind, but what are your overall thoughts and feelings about these images and campaigns as a whole having gone through these four and unpacked them a little bit, what's your general feeling towards them?

A: I definitely feel like some ads seem to be more beneficial than others and I guess I could use the word – or for someone of my background – triggering than others. The ones that were more directly related to healthier choices and food wise and just purely stating drink water instead of – like the drink water instead of soda one for example, I feel like that could apply to anyone and anyone that's not obese, so they could – that seems like more of a message that someone of my background would be like I have to drink water, I can't drink soda ever, I have to always choose the lower calorie option; whereas some of the ads that directly show an obese person and directly with a legitimate photo of what can happen, but not mentioning the food so much is a much more beneficial ad for both myself and also an obese person because it's really just showing with the legitimate photo what can happen if you are obese. So from both someone who needs to watch what they're eating and maybe eat more calories or more food, I think that this ad is definitely something with – something like the last ad is a much more effective way of maybe not prompting me to make the wrong choices, but also prompting someone overweight to lose weight and make their right choices. So I like the ads that – yeah, something like the last one and maybe something not so focused on just always choosing the healthy food option and eat this healthy meal because it just makes me think that I can never have an unhealthy meal if there's an ad saying that I have to eat healthy all the time, if that makes sense.

Q: Yeah, it does and I guess what I'm getting is that the ones you've said you have preferenced, it's not just a preference for you but you're actually considering everyone in that; so you think it's beneficial for you and also people who it might actually be targeting.

A: Yeah, that's right.

Q: So you actually answered a lot of those in one, I was going to ask in relation to your condition how you feel about them and then whether you believe there are differences between them and you've really just summed those up really nicely. So just the final thing that I'd like to ask is just giving you the time of anything that I haven't asked, me thoughts or comments or anything that have risen that I haven't really covered?

A: No, I don't think so; I think just I've already said it, the main thing from my perspective of someone of my background is that I definitely prefer the ads that don't directly just focus on food and not so much being overweight because I feel like if they don't have the overweight person as a part of the ad then it just makes me think that I have to follow that ad and that oh no, I have to eat healthy all the time. Whereas if you just have the obese person and I don't know, what can happen if you're obese, that's just much less applicable to myself and it wouldn't encourage me to I don't know, stop eating and things like that. So yeah, that's overall how I feel about those ads.

Q: Can I ask you one more question in relation to you said for you that it's more the specific food related ones that are a bit more triggering. Do you think that's similar for all persons with an eating disorder or similar to your diagnosis or that's specific to you?

A: I think a lot of people with my disorder would be very obsessed with their food intake and calories and what they're eating; I feel like generally speaking a lot of people with my background would have that sort of obsession. So I feel like – I don't want to generalise – everyone's not the same, but I feel like a lot of people with my condition would probably think the same thing that I'm thinking at the moment.

Q: Beautiful. Thank you, that's some really good insights and don't be worried that you-

A: That's alright.

(Recorder switched off)

Interview 6

(Recorder switched on)
Image 1

Q: Yep yep, now have you seen this before?

A: No I haven't.

Q: You haven't seen it before. Do you think it's something that you would notice?

A: Yes.

Q: Why is that?

A: Yeah it, it makes me really angry actually.

Q: Yeah, elaborate on that.

A: Yeah so, I guess since I really began my recovery and started a lot of reading about health at every size and one of my favourite books is actually, I won't say the word in the recording because it's explicit, but the f-it diet by Caroline Duna and I'm a big fan of her theories and she sort of gives the information that obesity is really the result of chronic dieting and people's unhealthy relationship with food whereas this image seems to allude to the fact that French fries are as dangerous as cigarettes which is ridiculous. You can have one French fry, you can have a whole packet of French fries it's not going to kill you, you have one cigarette and you're immediately filling your lunges with toxic smoke.

Q: Yep, so it's that comparison there that brings about the most anger? Yep. Are there any other initial responses you have to it besides anger? Are there any other emotions that come up for you?

A: I mean it's very clever, it's- I could imagine it would be quite an effective- it would scare people I think, especially people who weren't necessarily aware of the more emotional side of obesity. I think it's a pretty common misconception that all junk food is to blame for obesity.

Q: So do you think there's a bit of blame going on with this?

A: It's- I guess it's, it's putting the responsibility of the individual rather than necessarily bigger factors at play.

Q: And any other, it brings about anger but you can acknowledge that it's clever. Anything else, does this do anything to you in particular or ignite any feelings or behaviours or anything in you?

A: Well given that probably one of my biggest fear foods is fried food it certainly doesn't do anything to help with that. I mean I've got to the stage now that I can eat fried food but I think for those who are susceptible to sort of messages such as this one, I think it can do a lot of damage to people.

Q: Do you think that's still present in you? Or you're saying that you've gotten to a stage when you can eat them? So maybe you're a little bit past it, or it's still something that would affect you?

A: I guess it's still there, even at a subconscious level. I mean it's very hard to try and unlearn a lot of food rules that have come out because of common misconceptions of all fatty food being bad and all healthy food, you know fruit and messages being good, all those sorts of messages.

Q: And what do you think it's trying to achieve then? I mean you touched on the fear that any other …

A: I guess it's comparing the risk of obesity to the risk of lung cancer when they're two quite different conditions. And I don't know whether it's supposed to tap into these but it sort of brings in to me this idea of the taxation or what not around fast food and cigarettes. Both are taxed quite highly, that's probably all.

Q: That's okay, so you mentioned how this makes you feel from your perspective and being someone who has been suffering from the condition that you have for a long time and that brings about damage. How do you think that others would interpret this or perceive this, do you think that would be different to yourself or similar?

A: To be honest I think if you weren't as sensitive to the topic, it may not really affect you quite as much. Possibly you'd read it and wouldn't really give it much other thought. I guess yeah.

Q: I think if those, do you think that anger that you felt that that could be seen in other people as well?

A: Potentially to be honest it's not something that I really know.

Q: Yep yep. I guess just trying to see whether you think your perceptions would differ from others and you know mentioning that you would be more sensitive for it to sure, but yeah I just wondered if you thought that part might make other people feel- and this is all just like you said, you don't know, it's all just fears and things like that-

A: Yeah I guess, I mean it'd be interesting to know what other people thought of it when they're having an eating disorder affects people in a similar way or whether as everybody's different, everyone with eating disorders are different as well. So whether it's more specific to, I've got no idea but other individual sort of factors rather than the diagnosis as such.

Q: Sure, yep. And you touched on- I think it's safe to say you don't like it very much and what are people's likes and dislikes about it? Would you be able to just summarize that for me? So if there's nothing that you like that's fine but what is the main thing that you do dislike about it?

A: I dislike the fact that it's likening French fries to cigarettes. As I said you can have whole packet of French fries it's not going to kill you, you have one cigarette you've harmed your lunges irreparably so, yep.

Q: And the last question- would you have any recommendations for improvements as to how …

A: Oh, oh no. I wouldn't even know where to start really. No I wouldn't have a clue to be honest.

Q: Yeah so maybe just taking a whole different approach, there's not really one thing.

A: I think so, yeah.

Q: Okay, no worries. So we're going to do a similar thing for the rest of the three images if that's okay?

A: Yeah sure.

Q: Okay so this is- I'll just …the next one.

A: Yeah sure.

Image 2

Q: Now can you see that?

A: Oh no. Yep.

Q: Yeah so the second one, have you seen this before?

A: No, no thank goodness I haven't.

Q: Did you notice it? I get the feeling-?

A: Yes, yes.

Q: Why?

A: I can't believe it's actually legal to create this stuff actually to be honest. So many things. I think even before I really committed to recovery, I think this particular image would have evoked quite a lot of emotion in me. And then, so many things I could say. The fact that this is a young white female and she's sculling, as they call it in America, soda, and this- they're telling her to worry about being fat, it's just, it's, it's little wonder that kids are growing up with the sort of beliefs they have about food and weight and yeah it's terrible.

Q: Yeah so I know it's confronting and difficult but do you know if I unpack a little bit? You said there's so many things I could say about it.

A: Yes.

Q: If we just work through those, so initially what is the first thing that you noticed?

A: Probably the word fat, and the fact that they're just targeting that word and placing so much emphasis on it and adding so much meaning to it. Yeah.

Q: Meaning, what type of meaning do you think they're-?

A: So I suppose like, a lot of the reading I've been doing is about you know the power of the messages we're given and that thin is good fat is bad, whereas everybody is right in its own way and there's perfectly healthy people in larger bodies and this particular image sort of demonizes fat people as if it's the worst thing that can happen to you and I think that's fairly irresponsible to be honest. Yeah.

Q: What do you think they're trying to achieve with this?

A: I suppose they're trying to target the small percentage of people who do consume really high amounts of, I'm assuming they mean like soft drink, what we call soft drink in Australia, and they try to scare those people into thinking, well instead of having another glass of coke, I might have a glass of water. As I said with the previous image where it gets troublesome is that perhaps those that need to hear those sorts of messages are not and perhaps those that are more sensitive to the other things we've talked about perhaps they will take it onboard quite unnecessarily and develop a real fear of soft drink. Yep.

Q: Yeah that was going to be my next question kind of is, knowing that these are presented on a population based scale, you said that it's targeting the small percentage of people who might consume too much so then knowing who this is projected to, that concerns you, is that what you-?

A: Yes, yes.

Q: And then you touched on the model as well, what about that was so frustrating or indicated that emotion?

A: I guess we're giving the impression that this model is, you know, she's- It's a strange sort of contradiction really because she's obviously fairly young and healthy and white and female and I don't know how much of that stereotype is feeding into the particular target audience. But to me it's kind of a strange image because she doesn't look like she's, she's not enjoying the soft drink, I mean she's not- yeah. I'm not really sure.

Q: So you mean she looks like she's enjoying it.

A: Yeah she looks like she's enjoying it, I don't know.

Q: Yep, what about the overall message of what they're trying to say in …

A: They're basically instilling in people a fear of drinks with any calories in them and they're promoting water over soft drink and obviously if somebody was drinking only soft drink by the litres that would be problematic but at the same time drinking soft drink doesn't equal necessarily weight gain and as they put it, fat, yeah. So I guess, the little slogan there the 'rethink your drink' I guess that's trying to prompt people to be mindful in their drink choices. As I've already said, I think that's probably missing the real (*illegible*) of the image.

Q: So how do you think you've explained it from your perspective and obviously you've done a lot of reading on this and things like that, so it is going to differ from other people and I wanted to ask you again about this one, how do you think other people might feel seeing this?

A: I think it would also have an impact on others who were perhaps low in self esteem and had poor body image, whether they've got a diagnosed eating disorder or not. I can't talk for others who haven't' gone through this experience but I can imagine that many people could be lead to come to unhelpful conclusions from this particular image.

Q: Yep and so I know it's difficult when coming from if we use the technical medical terms, you could come from a perspective that you would know that you are technically underweight or below eight or something like that and that is, you know knowing that is one thing and that, … another on top of that, but if you could imagine if it could be like if you were someone who was overweight or quote unquote fat as they've used here, I don't know if you have any comments around that about-?

A: Yeah for sure, for sure, I mean it's very- it demonizes those people doesn't it? It really says, says to them, you're not as valued because of your weight. You're fat, you probably, it kind of generalizes that people have unhealthy habits, yeah I think that's probably- it certainly would be quite offensive I could imagine to those people.

Q: Yep, so I guess I'm not sure how you feel about the overall message of … instead I know, I mean you said that overall it's demonizing soft drink and things like that but do you think there is a better way to get a message like that across or a way that this could be improved without the harms that you've identified?

A: I guess I could do something a bit clever like somehow portray in the image, the notion of the soft drink being okay occasionally or sometimes, I've got no idea how they would do that.

Q: It could be completely wiping the slate clean and starting- coming up with a new one. It- I don't mean it has to be this image or ad in particular but the way we're getting this across without-

A: Yeah, yep, I see where- yep. There has to be a way doesn't there? I'm just trying to think of- I think it's like anything sometimes by targeting the wider population we don't necessarily provide the message we want to that element of the population that really needs to hear it, similar things with road trauma, those sorts of messages. I don't know to answer your questions.

Q: Yeah that's okay, that's no problem. Any other final comments on this one?

A: No thanks.

Q: No problem, I'll move on to the next one. Okay so image number three. You can see that okay?

A: Yep.

Image 3

Q: Have you seen this one before?

A: no.

Q: No problem. Do you think you'd notice this one?

A: possibly. Perhaps it doesn't evoke quite the emotion that the others did. I like the- I don't know how I feel about the image as such, but I do prefer the text they've used, swap it don't stop it. That's clever. Yeah.

Q: What about that message do you prefer?

A: I think it's overall a more moderate, a more moderate approach and isn't just black banning so called unhealthy foods. Yeah.

Q: And so you know you can tell that that initial reaction wasn't there for this one, but does it still bring up any emotions that are positive or negative or-?

A: Yeah I think still things like the little tap measure they've got and it's a lot less confronting overall I think which perhaps wouldn't have

Q:
Same immediate impact as the others. Yeah.

Q: Can you comment on the tape measure? You've just brought that up.

A: Yeah so I think they've- it's very implicit this one, the fact that they've got this sort of tubby balloon man and I'm assuming the reason they've included the tape measure is referring to his waist circumference. So it's a more, a more indirect image I mean in a way it's quite clever really, the way they've incorporated the tape measure to be like an exclamation mark. So I suppose it's quite clever.

Q: I sense some kind of buts or you know with the… conference I wonder what that is or if there's concern there at all?

A: Oh-

Q: Think what is it about that that makes-

A: I'm just thinking that waist measurements and things might provoke some anxiety for some people-

Q: Does it … for you or-?

A: I know … (unable to understand) I wouldn't be very impressed, I think yeah.

Q: Is there any relation to that to yourself, I guess elaborating a bit more on how you said you wouldn't be impressed or, how would that make you feel, the measuring of waist circumference?

A: I think its, its placing importance on, I know that in some ways it's an objective measure and, but at the same time yeah it's, it's- it's I guess it evokes a fairly anxiety filled response for me.

Q: Okay, yep. Do you think that would be similar for others?

A: I could imagine for other people who have problems with body image, it would be quite triggering, yes.

Q: Yep, so what about the overall messaging then? It sounds like you don't mind that.

A: Yeah I think that this particular message is a lot, a lot more balance in the way it's approaching the overall issue which is obesity and I think it's probably, it would certainly I could imagine be less offensive to somebody who is overweight then an image that directly calls them fat or those sorts of things yep.

Q: Yep yep. What do you think it's trying to achieve?

A: I think it' encouraging, encouraging people to think more carefully about their choices, to be I guess more mindful. I'm a little bit, I guess- it's a little bit unclear as to whether they mean, it's like what a low fat product or a full cream variety, those sorts of choices, there's some things you can't really get from this particular image. I guess it's not- obviously it's not as explicit as the last one where they're basically saying don't drink soft drink, drink water. So I'm not sure about what the message, the overall message is supposed to be. Whether it means instead of choosing a snack of chips to have a snack of fruit, so you're still having your snack- I don't know to be honest.

Q: Yeah, any recommendations for improvement then? Based on like what you've just commented on?

A: I guess they could- this one could be improved a lot more simply, well I should say it should be improved for those who are susceptible to it, more easily in terms of perhaps the image they used and even adding I don't know something like swap it sometimes or something like that, so it's not quite as black and white because I think with, I think with most eating disorders people tend to have very black and white thinking, so it's not particularly helpful to just be like well this is the rule, none of this, none of that, it's more about moderation and mindful choices.

Q: And what about the imagery? Any recommendations there?

A: Again it's hard to avoid the very cliqued images of like your healthy food so an apple versus an unhealthy choice or something like that. In terms of images-

Q: Or the ones' they've used and-?

A: Yeah, even if they included another person who was shaped differently or yeah, something along those lines you could potentially do.

Q: Yep, wonderful. Okay so we're going too- if there's nothing more on that one, we'll move onto the next one if that okay?

A: Yeah sure.

Q: Yep beautiful thank you, so this is the last image.

Image 4

A: Oh.

Q: Have you seen this one before?

A: No, no.

Q: Have you seen any of them via the campaigns?

A: No.

Q: Okay so these are Australian based and all of them I have shown you have been Australian based. There's TV, videos and stuff like that too.

A: Right, yep.

Q: It's probably good that you haven't seen them. Yeah, what was that. I mean there's a lot to talk through with it but initially what do you think it was that caused that reaction?

A: Oh the, it's a little bit- I don't quite know how to start. I mean right at the very top your eye immediately are drawn to fact that it says grabbable gut as if being able to palpate your own stomach is like a really bad thing. And then you've got this sort of quite grotesque image of what looks like the subcutaneous tissue which yeah it's, I mean even the little, even the little icon that's- the brand label, the live lighter, the fact that they've got it on an old fashioned measure of weight, there's a lot to take in with this image.

Q: Do you know I've never noticed that, the-

A: Really?

Q: Yeah yeah, I've never noticed that, that's very well picked up. Let's break it down then, the top part, so the grabbing part. What is about that that elicits such strong emotion?

A: I think it's so human and, we're pretty much- we have so many images in the media that models and that they've just got flat stomach's and it's like they're, they're giving the message that if you've got flesh, I mean by the looks of it this man, well I think it's a man because he's got a hairy belly button but anyway, it doesn't necessarily mean he's incredibly overweight or it doesn't really give you any actual information about this person or about their health, they're just implying that any waste sort of skin and what not is equated to this so called toxic fat.

Q: Yep, and what is it about that that makes you so uncomfortable?

A: I think it just perpetuates, I know it would perpetuate my fear of I've got a really- my stomach is one of the areas that I'm particularly most sensitive to and it probably, it probably- this particular image almost reinforces that particular negative belief. Yeah.

Q: So you think you would notice this yourself?

A: Yeah.

Q: And relate it back to yourself?

A: I don't know whether- like on a conscious level I think that, I'm pretty sure this is a man and on a logical level I could see what the message is about but probably underneath like my subconscious could be more, it's more one of those, those messages that you sort of take it without even realizing it.

Q: Does that bother you knowing again, going back to how these are projected?

A: I think it's concerning in that I know I wouldn't be on my own and I certainly think there's people that don't even necessarily have a diagnosis of an eating disorder but have poor body image and as I've said with the other images I can't imagine that the small proportion of society who these ads are really meaning to target, they're doing quite a lot of, almost collateral damage along the way by instilling fear along the way with initiative people.

Q: So the second half, the bottom half of that is the fact that it's used again, which I got your thoughts on earlier, what do you think that's trying to achieve? Showing the garden and showing the inside? What do you think the purpose of this is?

A: I think they're trying to say that their problem lies beneath the surface, it's not immediately apparent so they're being, I guess they're trying to tap into people who think more of the internal organs yeah.

Q: Yep and similar to the other one, I wanted to ask you, again it's hard for you to say when someone- and you know as people I can … with you who wouldn't be considered overweight by society and wouldn't be, how do you think that would feel- you know we can only have like a size but seeing something like this if you were that size or-?

A: Yeah it's, I mean you see what society perceives as fat and they refer to fat as toxic, even though in this particular message they're talking about their subcutaneous tissue, it's still an association they're making between fat and something that's overly negative. And I think for probably many people who haven't struggled with their weight and perhaps fall within a more normal or a more typical weight range, this sort of message might not even, I know that for example I've never smoked, so they're- the cigarette smoking advertisements I can see them and sometimes I might be a bit shocked about how- what's the word that I'm looking for how explicit and how confronting they are, it doesn't affect me on a personal level where I think if you're more susceptible message about weight and shape and thin, fat, all of those sorts of ideas. I think this sort of message could create fear.

Q: Yep, and my final question on this one *[removed for confidentiality]* is any recommendations or improvement?

A: Oh, I wouldn't really knew where to start with this one either to be honest.

Q: I might- so I'll ask it differently, so I know you've read a lot of … stuffs, … and things so I guess acknowledging that a large proportion of the population are you know deemed overweight, obese and that there are health complications that come with that and again as you've identified not for everyone, you can be perfectly healthy at those sizes, knowing that what these, you can see, it says supported by Cancer Council Heart Foundation at the bottom, knowing that they are trying to address that, I guess, but also knowing what you know on what these things might do or how they make you feel, I wonder if you have any suggestions or ideas of how we can address the issues that some people may be facing as a result of … things without the concerns that add such, that spring up. And if you don't, that's completely fine, it's a really hard question but-

A: Yeah that's a great question. I know that in advertising there's the shock value and you need to grab attention and what not, but I think for people's mental health, it would be ideal if they could target the positive health behaviours as positive whether it's got a happy heart doing skipping rope or something along those lines, so rather than necessarily target the problem per say, encourage healthy choices and other related factors.

Q: Yep.

A: Yeah.

Overall

Q: I think that's a fantastic suggestion, I'll stop, I'll stop sharing screen and get this out of your face. So those are the four images, now I just wanted to ask a few questions about them overall, so I guess just any overall comments on how you perceive this particularly as someone who is battling the condition that you are dealing with and the diagnosis that you've had for so many years. Knowing that these are campaigns that are shown, they're real life ones. So just a comment on them overall about how they may have made you feel or the concerns that they bring up or-?

A: I think they really reinforce what I've been learning in that society's relationship with food and weight is so complex and complicated and you've got a large proportion who are deemed to be overweight or obese and then you've got another group such as myself who are struggling with eating disorders. It just feels like the group in the middle seems to be diminishing, there seems to be fewer people who have a healthy relationship with food and I just wonder how much these images are contributing to the problems at either end of that particular spectrum. Certainly I feel like that I haven't seen them before, because I think they're pretty disturbing.

Q: And finally just one those, do you notice any difference between them at all or-?

A: I think, do you mean between the three images or-?

Q: Between the four, any distinction between those or the comment that you just made was in general overall about all of them-

A: Yes, I think the swap it don't stop it in some ways more heading the right, more right, but in a more helpful direction. I think overall- and possibly that one was a little more subtle as well with its approach, but I think overall still conform to some unhelpful stereotypes.

Q: Yep. Beautiful and that's all the questions I have about those *[removed for confidentiality]*, thank you so much, just a little bit of a-

(Recording cuts out)

Interview 7

(Recorder switched on)
Image 1

Q: This is the first one we'll be analysing. And are you able to see that one?

A: Yep.

Q: Okay, beautiful. Now if I'm looking down at any stage, I'm just looking at my questions. It's semi-structured, so I like to let you lead it too. But I just have some questions that I do try to get in. So if I'm not looking at you I'm – I am listening to you. So my first question about this one is, have you ever seen this ad before?

A: I haven't seen this particular ad. But I used to know a girl on Instagram who would – who made similar packaging for chocolate wrappers. Her idea was anything over a certain number of calories per hundred grams, would get – would get a – a warning. And I – I think the ad is really interesting. But no I haven't seen this particular ad.

Q: Okay, I'd love to delve into why you've said you think it's interesting.

A: Well I thought that – initially I thought that it was a good idea. But I think that blaming it on … on hot chips is a little bit scandalous. And probably not – not the right way to go.

Q: Yep why – why scandalous do you think? And maybe not best way-?

A: I just think that you shouldn't be telling people what – specifically what foods to eat, because it's a lifestyle. Eating that many chips isn't going to make you obese. And what's wrong with that? It's – it's sort of shaming people for being obese as well.

Q: Yep. And I guess – so your first reaction when you saw this, was that from – was that the first reaction? Or maybe that hit a little bit afterwards. Or what was that first reaction when you saw the image?

A: My first reaction was – it was a little bit positive, because I thought it was – because I kind of thought it was an art piece basically. So I thought, oh that's really interesting. And even though it may not send the right message it's still interesting to think about if it was an art piece. Did you say it's an ad?

Q: Yeah it is, yep. Not in Australia, but in the …-

A: Okay, yeah I don't think it – having an ad like that is a very good way to go. I don't think it's very …. Maybe – maybe I'm coming across PC. But it's not a very cool …. Probably not fostering the right message that you should be not eating chips ever.

Q: Yep, and then if we look particularly in relation to your condition. So you've told me – and I see a diagnosis. But you believe also – what was the secondary sorry, I'm just-?

A: … other way around. It was bulimia. I've been diagnosed with bulimia. But I think it's anorexia …-

Q: That's right, sorry. I was just … my notes …-

A: So yeah I think someone impressionable like a child – like me as a child, might not respond very well to that, is what I was thinking.

Q: Yep, and I guess given that you do have that diagnosis, and have had these experiences. I wanted to know if you think that other people would view the campaign in the same way as you? Or perhaps differently?

A: I mean to some people it could be water in a duck – off a ducks back. It may not affect them the way that it would have affected me. I don't think it would affect me the same way, I think I'd more … thinking about – rather than being affected by it these days, I'd be thinking about all the young people who might be affected by it. So there's all these different responses you could have to it. But I don't think many people would think too deep into it.

Q: And I do want to ask that, because I noticed you talk about – maybe it used to affect you. But do you think now given your work in treatment, and things like that, that it has no affect on you? Or it's just …-?

A: Well look at the moment I'm struggling with *[removed for confidentiality]* issues. So I'm not really – I think it's making my eating disorder less loud, because I can't eat very much anyway. But I just mean as an adult who knows a bit more about the psychology of things like that. That it – it would upset me in a different way than it might if I was a child. Think, oh no I should never eat – eat fries, unless I become obese. I mean that's what – there's 4, 5, 6, 7, 8 - there's 9 in there. It's not even – it's not even a snack.

Q: Yep so I guess also when you – in your first response you said, if you eat fries, you know you'll become obese. And I think you kind of said, so what, maybe at the end. So do you think there's also that-?

A: Yeah, yeah I think there's a little bit of a stigma associated with smoking cigarettes. I've just realised the irony, because I have a cigarette at the moment as well …. I didn't think about it until you – until I just mentioned it. Yeah I think there's a little bit of a stigma associated with smoking cigarettes, where they think that there's a moral for failing. So when you write obesity on the pack, and make it – and compare the two there becomes this – this comparison of maybe – maybe you're a bad person for being obese. Maybe you don't – maybe you can't control yourself, in theory ….

Q: Yep, so what do you think the campaigns trying to achieve then?

A: I think it's trying to achieve that healthy eating. Like saying eat – eat healthier so to speak. It's not – it's not necessarily trying to say don't eat fries. But that's the message that it sends.

Q: Yep so do you think it's a bit of a hit or miss in – I mean I'm guessing I know your answer. But you're not missing what they're trying to achieve then?

A: Yeah. Oh are you asking me whether it was a hit or …-?

Q: Yeah sorry …-

A: I think – I think it was a miss. I don't think they approached it the right way. And I think they're hurting people in the process.

Q: So what recommendations – and it's – it's a hard question. But off the top of your head if you could think of ways that – keeping in mind what you think the message is that they're trying to send. How they could do this a more effective way.

A: I think they could foster - rather than shaming the unhealthy eating. I think they could foster healthy eating. So they could maybe make a cute cartoon with fruits and vegetables, or something. Or I don't know if you wanted to be as extreme, you could have a family that only eats fruits, and vegetables or something as the main characters of – of an ad campaign. You could say these people eat – eat their 3 and 5 or whatever.

Q: Okay wonderful. So that's the first image. I've got 3 more to present. They're all a bit different. And I'll ask you similar questions about them. But I just wanted to ask, and you seem – the feedback and everything is really eloquent, and thoughtful, and insightful. And I wondered if you've done any work with this, or research, or maybe did you study, or work, or what is your background?

A: No I did – I just had an eating disorder for a long time. And I've done a little bit research into it. Just trying to get better, trying to understand myself, yeah.

Q: Yep and do you – what do you do for work? Are you working at the moment? Or not working at-?

A: I'm – I haven't *[removed for confidentiality]*

Q: Yeah lovely. Sorry I just thought I'd ask that, because … so insightful. And no it's fantastic … and I would always advocate for focusing on your health and mental health too, being someone also *[removed for confidentiality]*. So I can empathise to a certain degree that the experience that I have. So thank you for sharing that with me. And I can really understand that. And yeah good on you for continuing to work on that.

A: Thank you.

Image 2

Q: Alright, so I'll move to the second one now. A little bit different. So can you see that one?

A: Yeah.

Q: Okay so what's your – what's that first reaction there if you're able to put that into words for me?

A: It's just very …. It makes it look really disgusting. I think maybe they're doing that on purpose saying that, oh wow, they're saying fat is disgusting. Yeah okay, it just looks like orange juice in – in the bottle. But oh, so it's an anti-sugar campaign basically yeah. That doesn't make any sense. When people say …, because it – it's saying – it's bad in the – in the bottle, like soft drink is all sugar. So I think-

Q: Have you seen it before?

A: No I haven't seen this one.

Q: Okay sure yep, sorry …-

A: Yeah I don't know. Do you have any questions about this one, because this one's …-?

Q: Yes. Similar things yeah. So I do want to ask similar things. But I just wanted to … first reaction of where you see this? And I guess if you did see this do you think that you would notice it? It's not in Australia. But if this was – keeping in mind these things are sort of ads. They might be on bus stops, or billboards, or something like that. Do you think …-?

A: I would definitely notice it. I think I'd be more grossed out by the picture, than the – the message. Just knowing what it's supposed to be, it just looks – yeah it really grosses me out.

Q: Yep sorry to just keep it-

A: No that's okay, that's – that's what it's supposed to do I guess … effective – the message was effective.

Q: So do you think … - does that – does that put you off?

A: I mean they're – they're trying – they're trying to say, drink less soft drink. But the – but the way they went about it was to make people gross out by something. So even though they're not getting me to drink less soft drink, they're grossing me out, like they wanted to.

Q: What do you think of that as a tactic …-?

A: I think that they – they want to get your attention. There's necessarily anything wrong with using shock tactics to get peoples attention. But I think saying fat is gross, is not the right way to go. That is another shaming tactic. And I don't think that's very fair, or on people who may have body image issues thinking that they need to stop drinking soft drink. Or they're – they're as gross as the – the fat drink there.

Q: So what about people such as yourself, or with a history of disorder eating, body image struggles knowing that this target imagery, and all of the campaigns that we will be looking at today for a select group of the population. So we're – we're all exposed to these.

A: Yeah I just think that you shouldn't – you shouldn't be telling people with body image issues that, that is disgusting, because that's what they're already thinking.

Q: Yep so this is reaffirming that do you think?

A: Yeah.

Q: And do you think there's any – any risks, or harms or concerns associated with that? Particularly as someone …-

A: Yeah I think it would – it would really. It would be really triggering if I was in the wrong place.

Q: Yeah, okay. And what about for other people? So we can sort of look at it from that perspective. … people who have struggled with those issues. But what about if you had – do you think you'd still have the same reaction, or it would bring about the same concern?

A: Yeah look if you're susceptible to it, but haven't really thought about it, I think that it could bring out about the same issues that you're worried about.

Q: Yep, and I guess considering as well that maybe you haven't had those issues initially. But the exposure time as well, and – and how often we may being seeing these. I guess I'm only showing you a few today. But do you think the constant exposure to things like this would-?

A: Well I think that – I think the thing that people like the government – authoritative bodies putting these out, is a lot more effective as a – for the actual ad message, than it is that you showing me them to critique. So I think that if - if the government was putting these drinks out – these ads with the drink out. I think that it would be a lot more effective … message.

Q: What about – because I'm just interested in that comment that you said that who – who's putting these out. So you're right it's not an Instagram post or something like that. It is by government bodies, and health officials, and organisations who we are – who are deemed most trust worthy. Or that people would trust the most. So any I guess comments or thoughts about that given that you have identified that you it can send the wrong message, it could be harmful. But also given that that is coming from the source that it is.

A: I think governments need to be a little bit more careful about the messages that they send. Think about body image issues, yeah they're worried obesity. But what about the other issues that they – that they could be causing with the message that they – that they're trying to send?

Q: Yep. So how would you change this message then? Keeping in mind that what you just said. So they do want to address obesity as a health issue. And they've identified – they believe so there is a – a cause or a contributor. Thinking of this message in particular – I know you spoke about the previous one with … and fruits, and vegetables and things. Do you think there's a way that they could still put out this message, but – another words sort of …-?

A: They could have her just drinking water. I mean if she had water dripping down, it would have the same effect. Promote drinking 2 litres of water. As opposed to drinking less soft drink.

Q: That's a really – yeah a really, really good point. And I'm really glad you said that, because I guess the aim of … eventually, is that after having these conversations that we may give some

recommendations on. So I guess just saying not demonising a certain food group. But promoting the other that is beneficial?

A: Yeah I think it would be – people are going to go back to soft drink. It's going to be a … of the challenge. As opposed to enjoying the water. So when you – if they're still drinking as much – I mean they're not going to be drinking as much soft drink if they drink as much water as they – as they need. So they'll just have a little less. They'll probably not notice, and be like oh I had 600 mils today. As opposed to 2 litre bottle, or whatever, because I drank so much water. And I – I've heard that story before, because I – I – I – before my *[removed for confidentiality]*. I never really had – I never really had issues drinking not enough water. But I've heard from people who drink a lot of coffee, or a lot of diet coke that they – when they increase their water content, that they decrease the amount that they drink. So not – I mean … anecdotal. But if you tell someone that, they might be more likely to have a positive reaction to – to that – that would be a good way to pep yourself up to drink … soft drink.

Q: Yeah I love that suggestion. I think that's fantastic. And one that when I write this overall, is – is something that I'll definitely want to include about these types of messaging all together. Not just …. But that's a – yeah a great one, thank you. I'm going to jump onto the third one now. If you don't have anything else to say about this one.

A: No that's fine.

Image 3

Q: Okay beautiful. So number 3s a bit different again.

A: What is he? Why is he a balloon?

Q: I'm not quite sure. So this number 3, have you seen this before …?

A: I've heard of swap it notes, stop it. And that's basically when I was advocating before. I'm not sure though – I don't like the scale, the measuring tape on it. I think that sends a – a poor message. But a cute balloon guy, who doesn't really have … (phone/online recording drops out) any of us. Pretty good, and swap it, don't stop it is, I guess it's okay. But it's a little – it doesn't make a lot of sense on it's own. Whereas the other messages you could tell what they were trying to say.

Q: Okay, so let's – let's rewind a little bit to the tape measure. Can you – so you've said, you think it sends the wrong message. Can you elaborate on what type of message you think that that's sending? And why you think that that's not beneficial?

A: Oh actually I've just realised what the tape measure is supposed to be. The tape measure is going into a hole in the ground. So it's throwing away the tape measure – I think.

Q: I – I've – I've heard a few different perceptions of this one. I'm not sure what is correct either. If it's an exclamation mark, or?

A: It is the exclamation mark, I realise when I was explaining it. But I'm pretty sure it's going into a hole in the ground, because it looks like it's in motion. I like it if it's throwing it away. That's kind of cool. But I don't like the idea of just having a tape measure saying, swap to measuring – from what. I don't – yeah I don't know what that means. But it's a good idea.

Q: What's problematic about measuring, and from your-?

A: I think putting – there's not necessarily anything wrong with measuring. But it's putting – putting pressure on yourself to fit certain measurements and stuff. And just … - beating yourself up when you don't meet the measurements. It's okay to do it for gym, and go, oh yeah I'm getting sick gains. But if you're not the right size, and you're making yourself unhappy I – yeah that I don't think you should be doing that. It's just not healthy. So just tell people that you should is also unhealthy.

Q: Yep, and do you think – I guess for an eating disorder perspective, and body image perspective that this is something that would trigger audiences?

A: Yeah, yeah I think so. The tape measure would bring up eating disorder thoughts.

Q: So what about – so moving on from the tape measuring, to the overall message of, swap it, don't stop it?

A: I mean it depends whether you're – what you're swapping. I understand swapping soft drink for juice. But swapping – swapping soft drink for water, or whatever isn't necessarily going to last forever. I think you say, I'm going to have a water instead. You're not going to do that every single time. So it's just not sustainable. But swapping – swapping for – for a diet drink. Swapping – depending – depending on context. Swapping for a juice. Swapping for a smaller one. That's okay in the context of – that's what they should be promoting. But it's okay to have the soft drink or whatever in moderation if they know that - they should know that it's okay to have that – that … drink if you have that occasionally. It's okay to have it occasionally. And I – I don't know whether that message is coming through with – with this message.

Q: Okay, yep. So perhaps more information or something needed. And what I'm sort of interpreting is that you like where it could be going. But it's just you can't tell.

A: Yeah it's a little bit vague.

Q: Yep, but you don't mind the balloon man, you commented on.

A: Yeah I like him. He's a little bit chubby. Which goes against all the other – all the other messages we've been seeing today. But I just think he's cute, and he's – he's happy.

Q: Yeah okay, that's a really good point. Do you think people would think the same as you? The thoughts that you've given would be similar in the population or?

A: I don't know. I don't think people would be too … about the measuring tape. I think I can picture people just having a bad reaction to the balloon man.

Q: Okay, why do you think?

A: I don't know. I can just hear people saying it's creepy. Not – not …. But I can just picture that happening, for people thinking he's creepy.

Q: Fair enough.

A: His eyes are a little bit funny.

Q: And what about recommendations for this one? Any overall recommendations? I guess you've kind of touched on it. But just to know what you'd do differently?

A: It just needs to be a little bit more specific. I like the slogan. But the slogan shouldn't be the main – the main focus of the ad.

Q: And the tape measure? You'd – what would you do with that …?

A: Yeah I think that should just be black like the rest of the – the text.

Q: Yep beautiful. Any other … for that one, or?

A: But maybe – maybe an apple, or something. Or you could have a banana.

Q: Oh okay yep.

A: Because you need to have something in there to – to show that it's a health, fitness thing. But I think … is a little bit more – and a banana is a little bit – a fruit, because fruit's just a picture of health. Everyone knows you're talking about being healthy …-

Q: I guess it would provide some context as well … for someone-

A: Yeah, yeah exactly. You – once you take out the – the tape measure, you don't really know what it talks about. What it's talking about.

Image 4

Q: Yep, lovely thank you. Alright let's jump onto the last one. Just a warning, this one is quite graphic as well. Similar to the second one.

A: Eew, okay. This is another shaming one.

Q: I'd love to elaborate on that if that's okay.

A: Another shaming one?

Q: Yeah why do you think?

A: Because it looks gross on the – on the bottom one. And I guess people always have that reaction to grabbing the stomach where it's supposed to be – to be, oh I'm fat. That's the only reason people grab their stomach like that when they're making jokes about being fat. So that's the only time I've seen people do it. But so it kind of gives off the impression that you're saying, oh this guy's fat.

Q: Have you seen this one before?

A: No I haven't. I've seen this type of message before.

Q: Yep, yeah this one is Australian based. So not surprising you've seen something similar. And what do you think if you've said that – the only reason you know people do that is to claim they think they're fat, or along those lines. What do you think of them using that on a population … scale here and visually to try and …?

A: You just – just because your stomach hangs. They could have said your stomach hangs, then you've got this. It's a start. But I still think that the gross inside part means – is a shaming tactic as well. So the whole thing just needs to be redone.

Q: Yep. And what do you think the issue is with the – the major component being shaming? Or what are your – I guess just …-

A: Well it – it brings eating disorders in to people who don't have them. And it triggers symptoms in people who have them. And it just makes people feel bad for – for things that they may – may not have known.

Q: Yep, is this something that – and again I apologise it is confronting, and perhaps triggering. But in an earlier one you said that maybe when you were younger. Or if you weren't in the right state of mind it would affect you.

A: This one – this one would have been worse. This one would have been worse, because of the stomach. I've always had a – a loose skin, because I used to be – I had a – I was very big when I was younger. And it just never went away. So it always bugged me. For me specifically it would have triggered … (Unable to understand).

Q: How does that make you feel then knowing that this kind of stuff … out there, and – and people like yourself at 14 or 15?

A: I think I've seen stuff like this at the doctors. So it was not very nice knowing that they have this – these up at the doctor.

Q: Yep, yeah you're right they – they're – everywhere there's – there's been ads on TV as well, and things like that. And what about the – and it's similar to the others. But the use of the word fat, and if that is any bother? Or – what do you think of them …?

A: Well I think it's referring to actual fat. As opposed to being fat. But I'm sure if the words toxic fat are what – you use for shaming. Grabbable as well. Like grabbable gut just doesn't sound nice.

Q: And then again, asking about if you think your responses would defer to the general public whether they were concerned with body image or not? What do you think are people's general reaction to this would be?

A: I mean I think that people might – yeah water off a ducks back. They might think – if they don't have body images, … might just think, oh well I will just cut back on – I'll just go on a diet. Make – they think that they get healthier. I'm using bad terminology …. But they're saying they're going to make life style changes because of it. Yeah it might – it might be good for some people. But it might be triggering for others.

Q: What do you think we do about that then? The fact that there are these 2 health concerns. And they're obviously trying to address – address them here. But as you've said the concern is that it's ignorant of other conditions, and could exacerbate that. And I know that that's a really challenging question. And might not be answerable. But if anything comes to mind of being someone who has trouble from a condition that this can potentially trigger.

A: Like I said, they need to rethink the whole thing. I think maybe having someone with an eating disorder on – on – on the panel that decides that helps make the – the ad campaign, would be really useful. Or someone who's had one. Or a psychologist, something like that, would – would have been really useful. And they clearly haven't done any – any of that kind of research.

Q: Yep, lovely thank you. I'm going to get this one out of your face. So that was the individual images. And I guess I just wanted to ask some questions overall about them. If that's okay?

A: Yep.

Overall

Q: Alright I'll just get this …. So I guess just wanting to know general thoughts, and feelings. How you're feeling, or any thoughts that might have popped up about these images and campaigns as a whole. As I've said they are from different countries. But knowing that these are projected really on a population base scale. That there are people who could be seen, and that it could be harming. Like you said, maybe for some people, it's water off a ducks back. But just generally.

A: But I don't – I don't – it doesn't sit right with me that there are people who – who are – that they're putting it out there. It's like – it's like putting a used needle on the – on the ground. Not everyone's going to step on it. But the one person who does, is going to be – it's one – it's one in a hundred people. But that one – that one hundred person is – is going to get really sick from used needle.

Q: I've never heard that analogy. And it is an incredible analogy. I don't know who came up with that-

A: Me neither I just-

Q: Did you just come with that …?

A: Yeah. Yeah I'm just – I couldn't think of any – any other way to put it.

Q: No that – that was fantastic. I guess how do you feel seeing these and knowing that – I mean you've said that maybe you're – you do … lessons at the moment, because of the digestive issues. But does it bring up any sensitivities for you? So many …?

A: Maybe a little bit of anxiety. It reminds me of being a child. And having those – those fears and stuff. Like when I was really anxious about stuff like that. But – because these days I know that – I know objectively that there's nothing wrong with me. But when you're a kid you don't know. So there's nothing really to – to … I guess. So I remember just maybe think about those times.

Q: Yeah I guess also knowing that – the one thing that I'm particularly interested in is that objectively yes we may know these things. But sometime it doesn't stop us from still having the feelings that may be associated with them. Even though we may be educated about it, and things like that. It can still definitely lead to these feelings. Resurfacing, or – or being exacerbated. So acknowledging that as well.

A: Yeah no I feel alright. I'm pretty – I'm pretty strong at the moment but – mentally. But yeah it – that could have – it could have been quite triggering in the last couple of years. The – the stomach photo …, yeah.

Q: I was going to ask if you think there's – there's a difference between them really? Or do you think they're all really sending out the same message? … comment on-

A: They're all sending out the same message. It's just me specifically that would have an issue with it.

Q: Yep okay so that visual graphic?

A: Yeah, yeah.

Q: Any other differences in them? I suppose you pointed out those swap it, don't stop it in the - you didn't mind the message.

A: And I think that was the least – the least graphic, the least shocking of the lot as well. Which I liked. But I think the whole message of swap it, don't stop it, is it English?

Q: I – I think that was an Australian campaign yeah-

A: Okay, okay.

Q: That was in Australia.

A: Yeah it's from somewhere that's not where I am. But I've heard of it. So I know – I think the whole campaign was a little – was a little bit better than those – than the other pictures.

Q: And I – I did actually forget to ask you with – I asked you one of them. But if you think you'd notice them if you were walking past them? Do you think you'd notice all of them? Is it something that you'd be sensitive to or?

A: Yeah maybe. I would notice the – the fat drink – the soft drink. Just because it's so … and gross for me. What was the …-?

Q: The cigarettes and the cigarette packaging with the fries.

A: Yeah I would notice the cigarette as well definitely. Just I – because I would have assumed it was an art piece. And I … cigarette packaging because it's – because of the stylised way it is just appeals to me. Even the – the warnings and stuff. There's – I guess I'm interested in art. And I think that they've got an artistic appeal to them. So I always notice anything that has cigarette packaging in it, even on ….

Q: Yeah that's interesting. And the – I know you noticed the last one. So that was the most triggering for you. What about swap it, don't stop it? Do you think you'd notice that?

A: Maybe. Obviously I noticed the slogan, which I really liked. I thought that the slogan interesting. I came across it online. I don't remember anything about it. Whether I learned about it or what. But I just thought the slogan was catchy. So yeah – well I guess I did notice it at the time.

Q: Yep beautiful. Is there any other – any other comments or things that have sprung to mind in relation to these before I wrap it up …-?

A: No I don't think so. Thank you for today.

Q: Beautiful. So yeah I guess-

(Recorder switched off)

Interview 8

(Recorder switched on)
Image 1

Q: Let me know if you can see that okay.

A: Yep.

Q: Beautiful-

A: So well.

Q: What your – have you seen this before I asked …-

A: No, I haven't actually.

Q: No. Do you think that you would notice this in real life on the street, in a bus sign, or in a billboard …-

A: Yeah, I absolutely would notice something like this.

Q: Yep.

A: It looks like an ad for smoking but – for quit smoking, but obviously it's not.

Q: Yep. What's your first thoughts or the first things that came to mind when I pulled this one up?

A: Look, it's a pretty harsh message and I mean personally for someone like me it would make me feel very guilty about the idea that oh my god, next time I eat, you know, McDonald's or fries or something I'm literally contributing to, you know, to my own death, lovely. Yeah.

Q: Yeah, so that kind of starkness of it I guess is something that hits you straight away.

A: Yeah, absolutely. It's not very subtle.

Q: No, no, definitely …. So how does that make you feel then you said that it, besides guilt, that that sort of fear and guilt tactic is being used here?

A: It seems pretty heavy-handed. I mean I – yes, you eat too many chips and it's going to cause you a problem, but it's a pretty loaded sort of way to tell something that message. You know, there are lots of reasons people eat chips and it's because they can afford them or they're accessible or they're – whatever the reason might be. So it seems very focused on the individual, maybe that's just my perception.

Q: No, that – your perception is exactly what I want so that's fantastic. Can you elaborate a little bit? You say it seems focused on the individual. I feel like I know-

A: Well, you know-

Q: Where you're going, but just to clarify.

A: Yeah, so I mean … obviously it's taken the guise of a non or a quit smoking ad and as a former smoker who sometimes has struggled with that even in the last couple of years, you know, there's this whole concept that it's personal responsibility about whether your get cancer because you've smoked or whether you get cancer because you've made unhealthy choices and therefore contributed to your own illness. I mean that's how my mind works. Other people may not think about it that way, but personally it's quite personal because, yeah – look, obviously a lot of people don't want to quit smoking or they struggle with it and that can be a really difficult thing to do. And the thing with food is, you know, you're obviously choosing – I mean, it's very clever. I'm not going to say it's not a good ad because it is. But it's like telling someone, well, next time you have McDonald's it's essentially – you're essentially having a cigarette, that's kind of the message.

Q: Yeah. And – yeah, interesting that you've drawn that comparison there because in my own sort of research the literature has compared these 2 things in the way that we blame smokers is similar to the way that we blame people who, you know, quote unquote, overweight or obese category. And there's a lot of debate around that, over whether that's a okay or ethical thing to do. And I guess maybe have you had experiences or believe that it's being targeted in the same to you as previously being someone that smoked? Do you sort of-

A: Yeah, absolutely and that's why I recognise this sort of concept so strongly. You know, I smoked for a long time and, you know, I – felt – you feel guilty about it all the time. But it's one thing to make someone feel guilty about smoking a cigarette, I – to make someone guilty about eating food is pretty – like that's the message ultimately, it's like pretty stark. If you eat this food basically you're going it to yourself, so tough luck. That's – it's another blaming sort of message to people to say, well, if you eat this sort of stuff you deserve it.

Q: What do you think about that blaming?

A: It's hideous. I mean personally as someone – like I'm – *[removed for confidentiality]*. And, yeah, I've been – *[removed for confidentiality]*, right? So we're talking 20 odd years of – and that's probably unusual, but, you know, to give that sort of message to people that really it's your fault is really unhelpful because, you know, the more shame people feel around – and this is all stuff I'm, you know, still learning at the moment-

Q: Yep.

A: But all the shame that you feel around certain foods, it's not a very productive feeling. It either means you, you know, you stop yourself eating that food until you can't help it or, you know, you eat that food all the time and you just stop thinking about it. So it's a sort of message that makes people turn off because of – it's quite harsh.

Q: Yep. I wanted to ask – so you've given your perspective and from your experiences, do you think that people without a diagnosed or in recovery from an eating disorder or a similar condition would have a similar response?

A: I think a lot of people would go, yep, that's a great ad, and I personally think it's a great ad. I mean it might stir certain feelings me but, you know, I'm far along in my journey that I'm like, yeah, that's quite clever. So someone without a disordered eating background I think it's quite effective.

Q: Okay, that's interesting. When …-

A: I still don't think it's necessarily a good message, that's now how-

Q: Yep.

A: I would like the government, let's say, to put a message of let's be healthy out there. There are lots of more productive ways to do it than demonising, you know, a certain food because people end up with eating disorders for lots of reasons but one of those reasons is, you know, a focus on junk food. And it, you know, becomes this whole it's either good or bad and that's just for me – well, it's unhelpful thinking for anyone I think.

Q: Yep. I just wanted to go back quickly, you said that you're far enough along in your journey that you can look at this, I guess, a bit objectively. But what do you think it would have done or could have stirred in you if you weren't this far along? If you couldn't sort of stand back and have a look at-

A: Look – and when I say far along, I – you know, I love eating chips and I still struggle with doing that, being in recovery my body is changing because of, you know, what I've put it through. And I'm still fighting those … (Inaudible) foods or you eat none of them. It's very – it puts you straight in a place where you – you're faced with something, you know, that you might think about all the time. If you don't let yourself – let's say you haven't let yourself eat, you know, chips for 5 years, what's the only thing you can think about? Chips.

Q: Yeah.

A: It's – yeah, I suppose what – do you get what I'm trying to say? I'm probably-

Q: Of course, yeah.

A: Not explaining it very well.

Q: No, you are, I very much understand.

A: Yeah. And I suppose, yeah, it's really – it provokes a really shaming response, you know?

Q: Yep.

A: I know that potatoes are potatoes and they're a vegetable, it's okay to eat them, but, you know, it's a complicated thought for someone with an eating disorder because, you know, you're looking at - the item they've chosen here is obviously, you know, something deep fried and it's got all these associations with fast food and that – that's a big layer or it for me. And they've equated a food with a cigarette. One, you know, they're quite obviously two different things in – at a basic sense, but the layer of sort of blaming saying that it's a choice – is it a choice to eat?

Q: Yeah.

A: Yeah, that's what I think, yeah.

Q: Yep. And my final question about this one I was just thinking you said don't get me wrong, that's not the message I'd want the government or whoever to think. What would be a message on improvement that you think, if any, could be applicable to this? In what ways would you improve or change it so that it wasn't so blaming or guilt ridden?

A: Yeah, well look, I suppose – it's a good question. If we're talking about this specific concept of let's say we're saying that it's a cigarette packet, I would maybe – I don't know. I'd change it to be a less stark message because – I don't, you know, want to the message to be eating this food is bad so if you eat this food you're bad and it's your fault. That's sort of the idea here, so it is fed. You know, you change the cigarette concept and you replace it, you know, with, you know, two different types of some kind of food and one's obviously highly processed a bit crazy and the other one's like a piece of broccoli or I don't know. A message of it's not just about the things that you put in your mouth, it's-

Q: Yeah.

A: A bit more complicated, so food's only one aspect of it. So more, you know, how can you change a couple of little things in lots of different parts of your life without stressing so much about, you know – people, you know, get eating disorders from repeated focus on how you look. And it's a health, you know, question as well, of course it is, but, you know, everyone operates differently and you might process the message very, very differently to how I process the message. And I think if you want to talk about this sort of message to a large audience, you run the risk of alienating those with either diagnosed eating disorders or even, you know, inclinations towards eating disorders because it's quite a harsh message just in terms of demonising a food like you would a drug.

Q: … (Talking over each other)-

A: I don't know if I've answered your question, sorry, I do that.

Q: No, you absolutely have. No, I'm just – no, no, that was fantastic. I'm going to come back to that very last sentence at the end of our overall chat because that that-

A: Sure.

Q: Was hugely important, so I wouldn't have remembered that one in my mind. So that's the first one, I've got three more for you. They're a little bit different-

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Image 2

A: Sure.

Q: And we'll just sort of follow a similar structure, I'll just ask you about them. Have you seen it? What's your initial reaction? So I'll just scroll down to the second one now.

A: Sure.

Q: Okay, have you seen this one?

A: I have not.

Q: No. Would you notice this one?

A: Yeah, I certainly would. Wow. Yeah, that's – that's, again, I think it's quite a strong message. I mean first of all you've got a picture of, you know – well, it's only the top half of someone, but the appearance of someone sort of, you know, young and glamorous and slim going oh my god, this is amazing, I'm having a soft drink. But the message is don't drink yourself fat, it's a very confusing message for a start. The rethink the drink is very much like some of the police sort of ads, you know, they have the stamp on the – I forget what the = see, they're all government ads that you just sort think yeah, whatever. It's a very confusing ad and again it feels very blamey, especially when you're saying, you know, don't drink yourself fat, that's quite a stark statement but you're showing me a picture of a quite obviously slim, skinny person pouring soft drink down their face for some inexplicable reason.

Q: Yep, any – can you – any comment on – can you see that – the graphic there of the soft drink and that that's kind of solidified there? I don't know if you can see that-

A: Let me just have a – there were go …. No, and that's really gross. I think that's actually quite disgusting. Wow, I didn't actually notice that, thank you.

Q: No, that's okay-

A: Zoom in.

Q: I … maybe-

A: I am wearing my glasses, but I'll … that's actually really quite offensive. Yeah, and again, you know, even for someone without any history of issues around disordered eating or sugar or whatever, it's pretty confronting. I'm not saying it's not effective, but I think it's borderline offensive.

Q: Yep. … there's some kind of – there's the word … used here and then there's the visual or their interpretation of that. You said – I'm presuming that's what you're referring to as quite offensive. Would you mind explaining why you feel that way?

A: Yeah, sure, let me just while I'm telling you how I feel about it just make it a little bit closer for me. Yikes. So I mean the implication obviously is this woman is drinking liquid fat, delightful. That's not a very pleasant ad, I mean it reminds me almost of the smokers ads again. You know where they used to get the aorta and squeeze out tar, all that sort of stuff?

Q: Yep.

A: Delightful. I grew up in an age where we had the AIDS ads as well with like the grim reaper and

the bowling ball. Yeah, I'm of that generation so-

Q: Yeah.

A: I'm used to harsh ad campaigns, but that is-

Q: That's interesting … another one that draws comparisons when I look at this stuff is that comes up as well-

A: Yep.

Q: About, yeah, that's …-

A: Yeah, and again I was, you know, a kid when I saw those ads, so this ad specifically I just think the image itself makes you feel uncomfortable. And again I, you know, if I – yeah, I probably – if that was a billboard I probably would have noticed what she is actually drinking. I have no issue with the message, I think that's a great message, I drink heaps of water. But again, telling using that essentially if you choose to drink a soft drink, that is what you're drinking. I'm not sure if that's helpful for people.

Q: Yep.

A: Yeah.

Q: Think there'd be a similar reaction for people who haven't struggled with an eating disorder or body image issues?

A: Yeah, I think the image in itself, the fact that it's quite graphic and – yeah, it's just – it would make you stop and link … that's not a bad thing. It – yeah. Maybe if you didn't have a history of disordered eating you'd just think it was funny or you might just think it was quirky maybe, that's entirely possible because I can see where it's supposed to be funny. It makes me feel a bit queasy just looking at it, quite frankly.

Q: I … - I guess I also wonder from your perspective what do you think they're trying to achieve with this campaign? I know there's the obvious thing, but then underlying what do you think they're actually trying to achieve?

A: I think they're trying to make people or influence people to make different choices when they're buying soft drink and when, you know, they go to buy that – and they've used the word soda so I'm going to say that's not even an Australian ad, I'm going to say that's from the States.

Q: … (Unable to understand).

A: I hate that word. And I would – yeah, I'd say that they're trying to influence people's decision at the price point. You know, if you're at the fridge and you're going to get a drink you might recall this ad and go actually if I drink the soda I'm basically drinking fat, maybe I should have water instead. I can see that's the intent, I'm just – I'm just not sure it's a great delivery mechanism.

Q: Do you think there's anything wrong with that intent?

A: No, I think people should drink more water. I think that that's a good message, but I don't think people should be shamed for choosing to drink soft drink. I mean if that's all they're drinking maybe we've got a different problem, but as part of an education campaign again it's very much a message of yes or no, or black or white. You're either having water or you're having that, or if you choose to have anything, you know, a soft drink of any kind that's what you're doing. Yeah.

Q: Any recommendations for improvement on this one then?

A: I would change the image. I'd – you know, if you're trying to encourage people to drink water I'd have, you know, an image of, you know, a woman, doesn't matter what she looks like, or a man, let's be fair, with, you know, a nice sparkling glass of mineral water or, you know, a bit of lime or something that's looking enticing. Rather than trying to dissuade people from drinking, why not make water a more attractive prospect?

Q: What about the text or the slogan?

A: Don't drink yourself fat is very confronting. And choose water instead should be the big text and you should remove don't drink yourself fat, there's probably I'm sure 100 monkeys in a room with some typewriters could come up with a better slogan than that. Rethink your drink I like, but again it makes you feel like they're talking about alcohol.

Q: Yeah, that's a good point.

A: With that whole red stamp sort of, you know – it's like the RBT campaign almost.

Q: Yep.

A: That's what it reminds me of.

Q: Any final comments on this one before I show you the third one?

A: I don't like it at all.

Q: Okay. Thank you …. Alright, I'm going to scroll to the third one now which is completely different, so ….

A: Sure. This is like doing an episode of ….

Q: Alright.

Image 3

A: Okay, now I have seen this before.

Q: Okay, yep. Do you recall …-

A: Again-

Q: … (Talking over each other).

A: It probably would have been online, maybe on TV. I don't watch a whole lot of commercial TV so, yeah, it probably was – it was probably TV or online I would say. I'm pretty sure it was a government ad and at the – I remember seeing it and going that – I like the – I like this visual because like the model they've got is, you know, it's a bloke in his – he's not sort of some, you know, Ken doll. I don't like the tape measure. I would maybe use a different image but I do like this idea because, you know, we should be encouraging people to make small changes in their life, not giant, crazy ones they can't sustain. And the idea that this guy is all of us, we can all relate, some of us can relate to looking – well, feeling a little like that and … the idea that it can be – it's not a demand, it's a you don't have to stop doing everything, just maybe stop one thing. It's a more realistic-

Q: … sorry-

A: Message.

Q: … go back to the tape measure comment. Can you elaborate a little bit more on that? What is about that that bothers you?

A: It makes me think of The Biggest Loser. It – I don't know, it-

Q: Why is that a negative for you? I can tell there was negative-

A: Yeah, it's a negative and just because it gives me the – you know, when I look at that, it's telling me that, you know, I should, you know, swap something I'm eating for something else because it's healthier and it will have a resulting change in my waistline, hence the tape measure. And that makes me feel a bit of pressure.

Q: Okay, yep. Any other connotations associated with that one besides the pressure?

A: I like the message. It's a bit – it's a little bit confusing though. I mean it's – I'm making the assumption they're talking about and diet because there's a tape measure in the ad. You know, swap it, don't stop it is – it leaves you wanting to know a little bit more but it doesn't tell you much. … I think it's a far more measured way to promote, you know, balance.

Q: And you don't mind the balloon man you said? You think that he's …-

A: No, I don't like the balloon man at all.

Q: … (Laughing)-

A: That's personally just me, but I mean it reminds me of the, you know, I'm also of the generation that grew up with the norm ads on the TV, the Life. Be in it ones-

Q: Yeah. … (Unable to understand).

A: Yeah, so I don't know why I don't like balloon man. It reminds me of like an insurance mascot or something.

Q: Would you think you – so you don't mind the message but not a fan of the balloon and the tape measure.

A: Yeah.

Q: What would you do instead do you think?

A: I would even – no scales, that's not a good image either, but what you're trying to convince people or, you know, entice people to do is, you know, say hey, did you know that you could, you know, have this delicious thing but, you know, you've made it this way or you've replaced these ingredients and so it's healthier? Or, you know, the idea that you can still, you know, have things that taste good but – god, that's a bit complicated to … yeah, great, that's not helpful, *[removed for confidentiality]*. How about – okay, I would like the – I'm an animal lover. You could have, you know, an image of a big dog and a little dog or a puppy or a dog that clearly needs to lose weight in a comical way. Overweight animals is not actually funny, but it's a cartoon so, you know, it could look amusing. And the idea that, you know, one dog's making choices and the other dogs' make the other choices. And, you know, you make it a little more demonstrative because the minute you make it about, let's say, an animal instead of a person, people or those – … people will feel less defensive perhaps because they're not identifying with it. I don't know if I'm making sense to you, but that's-

Q: Yep. Do you think – so you think it's safer if it's something that people can't identify with?

A: Yeah. Like I suppose if someone's, you know, got concerns around food, anything like this is going to, you know, is going to trigger them, but an image of a tape measure would be a triggering image, it is for me. And again it reminds of The Biggest Loser or one of those, you know, shows. And yeah, look, I just personally don't like balloon man. I'm sure he's a great mascot, it's just me.

Q: Fair enough.

A: A man might respond differently.

Q: Any other-

A: I probably haven't answered your question at all.

Q: You have, please don't worry, you really have. Anything else about this?

A: Look, I think it's out of all the ones you've shown me that's the least offensive.

Q: ….

A: Yeah, like it sort of looks happy and friendly and approachable. That's, you know, I like the lettering, it's, you know, bouncy and friendly and cartoony which is, you know, not overly threatening. And the don't stop it, I like that because it's like – it makes you go actually you're not

telling me to do something, you're saying that I don't have to stop doing something, I want to know more. I like that bit about it.

Q: Yep. Wonderful, okay. Let's move onto the fourth one. Just to prepare for a little bit of a shift in tone again …-

A: Sure.

Q: … (Talking over each other) this is the final one.

Image 4

A: Yeah, that's – yeah, nice. I find that hugely triggering just for me personally because I carry all my weight on my stomach. I – look, I almost would say yep, that's something we want people to see, you know? It – for someone like me, it's causing a lot of shame, but yeah.

Q: Have you seen this before?

A: No, no.

Q: No. And do you think you would notice it?

A: Yes.

Q: Yeah ….

A: I think I would – I would probably – probably just not even – yeah. It's very graphic, you know, I'm not one of those people who can watch medical shows, so-

Q: Okay.

A: Maybe I'm the wrong – I'm not squeamish but, you know, it's not something I go looking for. It's quite confronting.

Q: Can you see-

A: it would-

Q: Yeah, just … triggered shame.

A: Yes, absolutely.

Q: Yeah. If you can elaborate on that a little bit more and then also how that makes you feel that you feel shamed by this.

A: Yeah, I suppose, you know, I see this and I go, well jeez, I'm carrying a bunch of fat on my gut at the moment. Wow, I can do that with my stomach. jeez, is that what I look like inside? Gee, I – you

know, and then I start going into that little hamster wheel of, well, the only way to, you know, fix this is to restrict food and then I'll go for a long walk and then I'll – it just – yeah, that's what it does for me. Because it's quite – again, you know, it's a very serious ad, but anyone who, you know, carries weight around their stomach would probably look at that and go oh my god, that's anxiety provoking. But it might cause some people to go okay, well, maybe I should do something about it. I mean those are the best kind of ads.

Q: Do you think that is helpful I suppose? So you're saying on one hand for you it causes that spiral in, you know, continual behaviour where you go around in circles and restrict, but that it might not do that for everything. But as a whole-

A: Absolutely, yeah.

Q: Yeah, given that this is – you know, it's not selective in who sees this, this is broadcast on a population level I suppose. So, yeah, your thoughts on that on do you think overall that that is helpful if people like yourself are really triggered by that? And do you think that shaming guilt is helpful and actually going to cause or contribute to long-term change or not?

A: I think you're going to have one of two reactions. One will be oh my god, I need to do something and go see my doctor and, you know? Or for someone like me maybe they'll, you know, start exercising or restricting food or whatever. But for the general population this could very well have an effect on people to go wow, I didn't even – I never thought about it like that, I should do something. And there's another bunch of the population that are just going to go I don't even want to look at that, that will just – it'll – you'll stop people looking at it straight away. But I'm not saying it's a bad message, it's probably a very good message but it's, again, very in your face. People will either be gripped or switch straight off.

Q: What do you think of the grabbable gut? … and the language.

A: Yeah, look, I think it's, again, it's very blunt. It's definitely going to get people's attention.

Q: Do you think that's a good thing?

A: Again, the – it's a serious health message, so yes, yeah.

Q: Yep. And what about again we have the use of the word fat and then that visual there, do you think this is educating people to something that they might not have already known?

A: I think people already know but I think seeing something like that, you know, it ticks off something in your brain that makes you go actually, you know? It gets you thinking about it more, so yeah, it's definitely a way to motivate people I would say.

Q: Yep.

A: In a – in the same way that, you know, the AIDS bowling ad motivated people, but, you know, maybe that's not a bad thing.

Q: Okay. So sensing a bit of both kind of – so I'd say like you're kind of on the fence about the

message that it's sending in that it is hugely triggering for you and maybe not helpful, but the overall message is important. Which I think is – that's just really interesting to me from the perspective of how much it affects you but looking at the broader scale and maybe that is some of that shame and guilt as well that comes out in – is there anything else that it triggers besides those emotions?

A: It makes you want to take action. Like it's one of those ads that you sort of look at and go, well, you want to do something immediately. You know, it's not like one of those ads that you sort of just think about for a while.

Q: Yep.

A: And yeah, if you want to get a response from people that's not a bad way to do it.

Q: So overall I don't know whether you like or dislike this one, I'm trying to-

A: No, okay, sorry. I'm probably – like yeah, okay-

Q: Don't apologise, no, no. I'm just trying to clarify-

A: So, look, I do like it. I think it's a good ad and I think it's very affective. It's … again, it's pretty in your face. I think it's more palatable than the woman drinking fat, that's – no-one should ever have to see that again. This one I like – yeah, it's brutal, but I think it's a good ad, I do like it, yeah. It's confronting-

Q: Even-

A: But it's-

Q: Yep. Even despite the way it makes you feel?

A: Yeah, absolutely.

Q: That's – yeah, that's really interesting to … perspective for me to be able to gain as well, you know, and that's why I do this and ask these questions is because we can have those sort of two frames of mind when we look at these. And – but I hope that, you know, I'm concerned about how triggering they are so I do apologise if these are quite triggering.

A: No, no, no, no, no, no, no, don't be, please. And again, you know, I'm working through my stuff, it's all okay. And again, this is a, you know, it's about opinions, it's, you know, it's nothing that I'm not already thinking about so don't worry about it.

Q: … (Laughing).

A: No, no, no, I think it's, you know – again, I only sought help in the *[removed for confidentiality]* but I've been unwell for a very long time. So it's, you know – until you know that there are people out there and that there are people actually thinking about this stuff, you know, why wouldn't you want to, you know, contribute? So-

Q: Yeah. Well, thank you. Just wrapping up on this one, are there any suggestions that you have? I mean you've said overall that you like it. Any suggestions for recommendations of improvement? Anything that you would tweak?

A: I don't like the colour of the text, like the blue and the white, that's just me. Yeah, I don't like the colour scheme. Apart from that I would include a message, you know, I mean I know it says you reduce your risk of … every day. I mean that's a pretty vague, light message for the imagery, that would be my only comment. Like they're giving you a very-

Q: ….

A: Striking, confronting visual-

Q: Yep.

A: Combined with a message of reduce your risk of heart disease, you know, eat less and move every day-

Q: ….

A: It seems like a real mismatch of image and message.

Q: Okay.

A: Because yeah, those two sections are very full on and then it just says you can reduce your risk …. Like, well, you're not going to tell me something like really important right now. I know that's important but the way you're telling me, it doesn't seem important.

Q: Yeah, that's interesting. Alright, I'm going to get that out of your face, this one. So that's all of …-

A: That's alright.

Q: Images and I just wanted to finish off with a few questions overall about them if that's alright and then we'll-

A: Sure.

Overall

Q: Wrap up. But I know that they were all a bit different, but having shown you these four and they're from different countries and have different purposes or approaches, what are your thoughts and feelings overall as a whole of, I don't know, effectiveness or things that it bought up for you, that of concern, or any general commentary around them?

A: I would say that messages that you're wanting to send to the general population around healthiness and weight control, they do need to be strong sometimes and then you have those ads that you've shown me, some of which are quite confronting. They have a place, but I think you want to bring more people along on the journey by making the message fun and relatable. For example, I still remember, yeah, the be in it – Life. Be in it ads from when I was a kid, right? And that's Norm on the couch drinking a beer-

Q: Yep.

A: And maybe that's a product of my generation, but if you make it more relatable to people's everyday life like, yeah, showing Norm walking the dog or throwing the frisbee or I don't know. But what I'm trying to say is it's a great message, the way they've tried – the way they've chosen to show it in what you've shown me is more of a scare tactic than a hey, have you heard about this great stuff called …? Like, you know, this great new whatever vegetable trying to sell, I think when the government starts marketing and assisting industry to market like vegetables and fruit like they do processed food I think that would be way more helpful, you know? Because just telling people don't eat that, don't eat that, you should move, for some people that's going to be yep, great, you've told me what I need to do, off I go. But for a large proportion of people it's not simple. And yeah, the big stick doesn't always help-

Q: Yep.

A: For some people. You know, even if they don't have an eating disorder, if they have, you know – for whatever their problem might be, it's just going to cause more internalised shame, you know? That's my personal opinion. The more you make it an option for people that's accessible and not you shouldn't do this, it's like hey, have you heard how great this other stuff you could be doing is? It's not telling them they can't eat X, Y, Z, but it's telling them hey, do you know how great this stuff is as well? And, you know, giving it a marketing job like you would, you know, a new product.

Q: Yep. Those insights honestly have been really, really amazing and you're the *[removed for confidentiality]* person I've interviewed now and showed these to. And sometimes you get the point-

A: How's it going?

Q: Yeah, good but sometimes-

A: …-

Q: You get to a point you're hearing the same things but you've said a lot of things that people haven't yet, which I think is really interesting and has been so beneficial. So thank you for that and just for being-

A: Yeah, no worries.

Q: … and honest.

A: Yeah ….

Q: I guess with – yeah, just debriefing a little bit about why I'm asking you all these questions and things about you kind of said it when I said I'll come back to what you said in that first image and you nailed it and pretty much summed up everything I'm doing. You said that, you know, they run the risk of alienating or harming some people in the process, and that's exactly what I'm looking at. So my research is looking at these government of health body issued campaigns and messages and really critically evaluating them for their potential to cause harm to vulnerable audiences. And exactly what you said, not just people who are diagnosed, but people who might be on the way or sort of tendencies-

A: It doesn't take much and if it's a government sanctioned message, that's almost even worse and I speak from someone who's *[removed for confidentiality]*. I only just cut that off like 7 months ago-

Q: Yep.

A: And it's all very well to tell people they just need to eat healthy and move more. It's not that simple sometimes.

Q: No. And I guess-

(Recorder switched off)

Interview 9

(Recorder switched on)
Image 1

Q: Ask you is have you seen this before?

A: No, nup.

Q: Do you think it is something you would notice if you had seen it?

A: Yes, yep.

Q: Why is that?

A: Umm, well for me, I guess it is quite a, a, umm, well I just think that it's such a broad statement so I would probably remember it, especially because, well I am aiming to work in like *[removed for confidentiality]* so I think I would remember it because it is quite a big fact if that is what they are saying.

Q: Yep

A: Yeah

Q: What's your initial response to the overall imagery and messaging?

A: Umm I don't like it.

Q: Okay

A: Umm I think obesity is a, a very umm, it's creating a negative connotation with the word, as if being obese is, it makes it like being obese is the worst thing in the world and you are going to die if you are obese, umm, and, I guess then it also, with the fries in there, that also now makes fries seem like they are a bad food.

Q: Yep. And what do you think, what is your problem with that? Why don't you like that they've done that?

A: Umm I don't like how, umm, food is labelled as good or bad, too, umm because then, I don't know, that creates fear around food which is not what we want. Yeah.

Q: I guess, so that's your immediate reaction, what about if we dig a little deeper into, given, you know, the diagnosed condition that you have spoken to me about which I believe was anorexia was it?

A: Yep

Q: Yeah, umm how do you think it relates to you in that way, or if you think that you might perceive it differently, or just how you feel about it in relation to your condition?

A: Umm, hmm, well, because they talk about cancer I feel like my Anorexia doesn't care about that. I feel like, umm, like the fear in that would be the word obesity rather than the word cancer, when it should really be like, you should be looking after your health because of cancer rather than being obese, umm.

Q: That's interesting, yep.

A: I think like, well I know my Anorexia would probably remember that, umm, remember that statement and then probably live by it. Rather than like a normal, well like, someone who is not affected by an eating disorder might just, you know, not ever think about it ever again, where as I would stew on it.

Q: Yep. So it sounds to me as it is almost like the fear of obesity was greater than cancer?

A: Yeah, the fear of being obese or overweight overrides everything.

Q: Yeah I completely understand that. Is that something that is still present for you now or are you able to separate that?

A: No, it is still present. I think I am more mindful of it now though.

Q: Okay

A: I am more aware of the thoughts but it is still definitely there.

Q: And what about you spoke about the fries…

A: Yep

Q: Does that trigger anything?

A: Umm, it does, for me in particular because, *[removed for confidentiality]*, they look like Maccas fries, so it is like, *[removed for confidentiality]*, so for me that's like oh I was right I shouldn't be eating.

Q: So it is confirmation for you?

A: Yeah, and I guess umm, yeah I don't know, fries are just like deemed bad when they shouldn't be you know, they're yum.

Q: Is this just Maccas, like would you eat it from somewhere else, it is just because you made yourself that rule?

A: Yep, so I would eat it from somewhere else which is ridiculous.

Q: I completely understand, you don't have to, haha yeah.

A: I would eat it from somewhere else but yeah, it was a *[removed for confidentiality]* and now I just can't break it, like I just can't do it.

Q: And the longer it gets its like…

A: Yeah exactly

Q: Yeah okay I completely understand that. So you touched on how you think maybe someone else might look at it. How do you think they would? I think you said maybe they would just brush it off or something, do you think the general public may be not as affected as someone with an eating disorder, would just look at it and brush it off? No right or wrong just how you think they might perceive differently.

A: I think society as a whole probably, they probably, umm, care about, I feel like women and everything, all this yoyo dieting and all of that, umm, I think they probably, some people might remember it, like some women who are trying to lose weight or something, they might remember it,

but I feel like, (illegible) if somebody was obese or smoking or anything they probably wouldn't change anyway I think they would just brush it off.

Q: Okay that's fair, interesting, so mainly just someone from your kind of perspective would take it to heart.

A: Yeah

Q: What do you think it is trying to achieve then, if someone has created this, what do you think the intention is- I know there is a surface level intention but if you think about it a bit more, what is the point of putting this to the world I guess?

A: I think they are trying to say that, umm, obesity is quite unhealthy. And that, umm, yeah if you are obese you are more likely to get cancer, but umm I feel like it is just trying to create fear around it. Obesity is the second worst thing you know, like after smoking.

Q: What do you think of the use of fear tactics?

A: Umm I think umm people are probably ah, more likely to change if they are scared of something.

Q: So you think it is powerful

A: Yeah. I would say it is quite a powerful message, umm, but yeah.

Q: But one you don't support or like?

A: (illegible)

Q: I guess I wanted to ask you as well, you have eluded to the fact you don't like it, but what are your thoughts on the fact that these messages aren't exclusive and they are projected on a population based scale, so there is no determining who is and who isn't going to see it, it is just blasted out there so I guess from your experiences and what you have been through how does that make you feel knowing that you can just be walking down the street or and it is on a bus stop or whatever it might be.

A: Yeah, I feel like, umm, so many people don't realise that like, health goes beyond your size. Like overweight people, overweight people (quotations) could still be super healthy and there are thin people that aren't healthy so I feel like this is showing that your size is a predictor of your health and some people might umm… then that just reinforces it for everyone that if you are overweight you are unhealthy I think it is just reinforcing that message, which is wrong.

Q: Even though you can, sort of umm, separate yourself from this and say that is wrong, despite all of that, do you think it is something that still affects you? Even though you know theoretically, does it still play on your mind a bit?

A: Umm 100%. That's what probably the most frustrating thing is that I can be so logical about something but it doesn't matter, like the eating disorder is still going to be like no.

Q: Yeah, (illegible). My final question about this one Nelly, is do you have any suggestion how this can be improved overall or something small?

A: Umm

Q: If someone said fix this, what would you do?

A: Umm, I'd probably take out the fries from that picture, umm, I'd just umm, it is hard to make a small change because it is like, I would be like, rather than the word obesity, it would be about like,

something that is happening with your organs you know, on the inside rather than the actual term obesity but then that's completely changing the add so…

Q: That's okay you can…

A: Yeah I think, or like, rather than deeming food as bad, could umm, have something about what good, what healthy foods do for you rather than saying it's a bad food, you know what I mean. Yeah.

Q: Lovely suggestion. Alright so that is the first one we are going to do. We are going to do exactly the same for the next three. So just feel free to, you know whatever you are thinking or feeling or whatever comes up, umm my questions are just for a little bit of structure but if there are other things you want to say go for it.

Image 2

Q: So the second one is… I will just get that right… so you can see that okay?

A: Yep, thank you

Q: Okay. Have you ever seen this one before?

A: No, nope.

Q: Do you think you would notice it?

A: Yes

Q: Okay, why do you think that is?

A: Umm a big thing for me with my eating disorder and I think a lot of people struggle with it is you don't want to drink your calories because its like wasted. Umm, so I think for me in particular that would stick with me. Umm, but I also… "don't drink yourself fat", hmm, I guess, because like, ah, this one for me it's like I'm not much of a like, soft drink drinker or anything anyway, so to me its like its not that meaningful to me, I'm just like oh, I wouldn't drink it anyway.

Q: Yep

A: Yeah

Q: And that's not because you don't think that its unhealthy or whatever it might be but you're just kind of disinterested in soft drink?

A: Yeah like, I like it but not really, like it's never like I really crave it or anything, like fries I would I'd crave that but soft drink, I don't know, yeah.

Q: Are there any other initial reactions that you have to this one when I kind of put it up there?

A: Umm, yeah, the model, she's quite thin… so it's like, yeah its glorifying she's thin, and then, but then she's like smiling and drinking it so its like, its like she's enjoying it but you shouldn't enjoy that you should enjoy water like that's what they're saying.

Q: Yep, what about, can you see, umm, I don't know how big the image is for you but, that soda kind of going down and what that is umm visually representing?

A: Yep. Umm, nah I don't know.

Q: That's okay

A: It better not be like her vomiting it up. I hope its not that. I don't really have any thoughts about it.

Q: What about the messaging, so away from the image but that kind of sentence there – "don't drink yourself fat, choose water instead"?

A: Umm well I guess it is once again reinforcing that fat is bad, umm, and again there's nothing, it's like there's nothing about balance there or anything its literally just like you're not allowed to drink that you're only allowed to drink water, it's very black and white, it's not like well you actually could have soda sometimes if you want it, you know, its all, its all just no, no, deprive.

Q: One of the, so the ways that I think people have interpreted this one is that what is coming down is the soda turning into fat, so that's actually meant to be fat.

A: Oh yeah right

Q: Yeah, does that trigger anything or?

A: (Illegible)… umm, yeah well that's like, because like for me, if I ate something like unhealthy straight away I think I am morbidly obese and that I've gained all this weight so that's like what it's showing- as soon as you drink it you put on all this fat when really you haven't and its fine but…

Q: How does that make you feel then, you know if it was something that you could relate to, food that you could relate to and they're saying that you know, put it into your mouth and this is what happens…

A: Yeah ahh increased fear, if I have a lot of that food it becomes more of a fear food, and I'll… something like that, (ineligible) food that I do enjoy like I would remember that, and then you know the more you deprive yourself of it the more you want it, but, yeah, I don't like that at all.

Q: How do you think people without that insight and perspective that you have from your eating disorder would perceive it if they were to see this?

A: People I'd be most worried about with this is like, young kids or teenagers seeing this, and already create fear around food, and drinks, umm, ah I think, I think with this, umm like soda, it says on there, I think people already know its not the best for you, so I don't think when they're buying a soda, they're not like oh this is okay, I think they already know that they should be drinking water anyway, so I don't think it's that, I don't think people would really care about this one to be honest, unless you were, you know, had an eating disorder or problems with their diet or young, I think if you are young then that could be quite impressionable, yeah.

Q: What about, umm, the aims, and umm, what do you think they are trying to achieve with this? Instilling that fear or do you think, do you think that's intentional or?

A: Umm, I don't reckon they've intentionally made this a scare tactic, but they've definitely umm, they're definitely reinforcing the fat thing, which can create fear for people if you know what I mean, like it's not like the other one where it is like cancer, like obviously pretty much everyone is scared of cancer, but like that, that's just reinforcing that fat is bad. I'm actually surprised they picked a thin model though. I thought they would, cause I reckon if they were trying to create more fear they would use a bigger model because people think that is bad so it would you know, it would show that like soda would make you look like that when its not the case but, I think people would think that. I'm surprised that the chose a thin…

Q: It is a bit of a paradox this one and most people have commented on that.

A: Yeah

Q: Anything else that comes up with this one *[removed for confidentiality]*?

A: Umm, no I don't think so nah.

Q: We might, umm push onto number 3 then if you're ready? So I will get that one up.

Image 3

Q: So this is number 3.

A: Mmhmm

Q: Have you seen this before?

A: Oh I feel like I have years ago on TV I think, an ad maybe.

Q: Yep, this is an Australian one so that could be.

A: Yeah

Q: Yep, umm initial impressions?

A: Umm, its better than the others.

Q: Why, why do you think?

A: Umm because, umm, at least it is saying don't stop it so its not like don't stop it all together, obviously I have forgotten what context this is in, I think this was about stopping food wasn't it, like rather than chocolate you have vegetables is that what it was?

Q: Yeah

A: Yeah, so yeah, like I still think its better than the other ones, umm, is it meant to be a measuring tape?

Q: It is yeah

A: On the side? Cause If it is I don't like that but.

Q: Would you be able to elaborate on that?

A: Umm, cause yeah once again it's either, measuring tape, you're going to decrease your size, or umm, you know lose weight when it really shouldn't be about that it should be about living a healthy lifestyle, umm I do prefer swap it though cause at least it is still encouraging eating, it's not like don't eat all together, but then I think you know, if you're swapping all your chocolate for vegetables you are just going to want chocolate more so, and I kind of like I don't think people would care as much about this though because it is like cartoon.

Q: Okay yeah that's interesting

A: I just, I don't know, it makes it not really seem real you know?

Q: The measuring tape, so you did comment on it but is that something that personally for you is triggering?

A: Umm not the measuring tape as such, mine was more scales.

Q: Okay yep

A: Umm, but I think people with eating disorders, some people would use measuring tapes and things like that so, and once again its just about weight instead of health so, I don't like it

Q: Yeah, sorry I just wanted to confirm, and, so you said the cartoon, what about that cartoon figure? IS there anything about that that you notice or?

A: Umm, I did notice like, he's umm, a little bit bigger, its weird saying it about a cartoon, around the stomach, umm, but, hmm, he looks, he looks like a happy cartoon so its not like they're using a huge balloon or a skinny balloon, I feel like they've just got an average sized guy there umm, I guess it's, it's hard because I don't know if he's like, been on the journey or he's about to start the journey.

Q: Yep

A: So, umm, yeah, but he looks quite happy there, I guess its umm, his smile is making it seem like its going to be great, swap it don't stop it you know, for this fantastic lifestyle, yeah.

Q: Or neutral?

A: Umm, do you mean positive in what way?

Q: So them using you know, a something or someone conveying that positiveness, you know if you do do this, do you, is that something you like or? Perhaps don't like or?

A: Umm, kind of neutral because I feel like, umm, they, they cant really show what your life would be like if you did this, swap it don't stop it, so its like {illegible) the happy one because I feel like if they pick the sad one, well, no one is going to be like yeah I will try this out, so yeah.

Q: So for all, you're okay with the messaging, you think its better than the others at least.

A: It is better than the others yeah.

Q: Yeah. Do you think there is anything, is there anything you would change with this one, any improvements?

A: Umm, this one, it should have like underneath it, like, create a balance rather than, cause it's not really giving any context I don't really know like, don't, saying swap it don't stop it, but technically you are stopping it if you're not going to eat the chocolate, you're going to eat vegetables instead do you know what I mean?

Q: Yeah so the interpretation…

A: Yeah

Q: Anything else with this one besides the addition of that wording?

A: Umm, oh and get rid of the measuring tape.

Q: Wonderful okay beautiful, we might move onto the last one then. Okay.

Image 4

Q: Okay so this is the last image here. Have you seen this?

A: No. I don't think so. Not recently anyway, I can't really remember it so.

Q: Do you think you would notice this one?

A: Yes and I hate it.

Q: Alright let's delve into that, what is it, I know that probably a myriad of things o we can just start with the first thing. What's the first thing?

A: Umm, ah the grabbable gut outside, especially, like this is, I'm assuming that's a male in that top photo but umm, it doesn't specify that at all, but like, cause like, females would have more fat around their stomach, they need it, so if females did that too and majority of the population would have a grabbable gut, so, and then showing that that means fat on the inside, when it's like, we do actually need a little bit of aft, you know, like, it's normal to have some fat on you, that you're able to grab. Umm, also with the, I don't mind the reduce your risk of heart disease, type 2 diabetes and cancer, that section, but, by eating less I don't like that part. Moving more, that's okay I don't mind that, I like encouraging daily movement, and I like the word movement rather than exercising, that they use that, yeah, I don't like the eating less part but I think its good that at least they are talking about like, actual conditions rather than just being fat, but the two pictures should be gone.

Q: Can I ask about moving versus exercise? What is it that you like about moving?

A: Yeah, I think that moving is more, ah, being in tune with your body and it could just be like a bit of yoga or stretching, or it could be going on a run whereas exercising its like, lets do 45 minutes of high intensity exercise, that's what, I don't know, that's the, like, connotation that I kind of get with it, umm, but yeah. So I think moving is a nicer word, yeah.

Q: And lets go back to the grabbable gut, so how does that make you feel, does that make you reflect on your own body and your own stomach?

A: Ah definitely, I think my stomach is probably one of the areas I am most self-conscious with, umm, so, and because I think because I do struggle a little bit with Orthorexia as well so its like, I want to be healthy, so its like toxic fat, if teres fat on my stomach it means its toxic fat you know, its like oh my gosh im so unhealthy so, I just don't like that at all.

Q: No fair enough. Do you think this is something that only people with a similar condition to you or a similar experience to you would be quite confronted by? Or how do you think the general population would perceive this?

A: Umm, I think the general population would also, I think this would impact a lot of people because, once again most people have a grabbable gut and, there's, umm, like I just feel like this type of ad on top of all the other messaging we get about, you know weight loss and diets and things like that, likes its just reinforcing that you should be losing weight, its like you know, weight loss isn't the best thing you can achieve in your life but its like it is, umm, rather that just umm promoting a balanced lifestyle with exercise and eating it's about don't be fat, you know?

Q: Yeah, and what about the direct association that they've put there, that, you know, if you have this then it means your insides look like this

A: Yeah, and, well, especially women, its like if you don't have enough fat, then you know you're not getting your period and things like that so it's like you're saying I'm not meant to have fat but then if I don't have that fat I don't have my period so its like what do you want you know, that actually fat doesn't necessarily mean it's toxic on the inside you know, visceral fat is the more, umm you know, thing that we should be talking about, well, you know should be, is more of a concern than just grabbable fat, that's like, it's just so broad that you know, I have grabbable fat on my arms does that mean, you know, I'm unhealthy? And I'm sorry that's just what my arms are, so you know, everyone has their natural body size, whatever that is, like that's okay but then like showing this, you could exercise 5 times a week and eat quite a healthy balanced diet and still have grabbable, you know, a grabbable gut so then it's like what more could they do? And then that's when the unhealthy, you know, habits come into play because then they would probably eat less or exercise more to try and achieve this no fat sort of thing. That, that doesn't mean unhealthy, so, yeah.

Q: I want to ask a similar question to before, so given you have all this insight, you seem pretty aware of what's going on, seeing this immediately did that trigger anything within you?

A: Umm, the grabbable gut bit did but the toxic fat on the inside not really because it's like I just don't really care like as long as I look skinny, like that's all that matters so.

Q: Yeah

A: Like, yes of course like nobody really likes saying that they have toxic fat on the inside, but its also like, I could have toxic fat and be skinny and that's, that's fine I'm all good, you know? Like…

Q: It's similar to the cancer one.

A: Yeah

Q: You don't really care.

A: Which is wrong.

Q: I, yeah I completely understand.

A: Yeah

Q: What would you do then to improve this, if anything, if you think it can be improved?

A: Umm, hmm, make the font bigger of the reduce your risk of heart disease and type 2 diabetes and cancer- emphasise that rather than the fat, don't call it toxic fat, and don't call it a grabbable gut, umm, just not show this ad… nah umm, umm yeah probably just get rid of the images like I know you need images to like advertise like that's what can kinda draw people in but, this one I think is a fear inducing one for people. Like yeah. I, I just feel like all these like, middle aged people, or older adults kinda like trying to lose weight, you know how everyone's always on lite n easy and everything like that, I feel like that just, this reinforces that they should be doing those things, you know?

Q: Yep.

A: There's more to life than eating Lite n Easy, like… (laughs)

Q: Anything else about this one in particular Nelly?

A: Umm, no I don't think so.

Q: Alright I will stop sharing it and get it out of your face, I might just ask some questions about them as a whole If that's alright, are you alright to keep going?

A: Yep all good

Overall

Q: So I guess, umm, after you've seen all of these, knowing as I mentioned that they are usually broadcast on a population based scale and things, what are your overall thoughts and feelings and how you might be feeling after being exposed to these?

A: Yep. Umm, me, in, me as an individual I think, like, fine, because its like I feel like I'm just already aware of all that, I already know about, I already know about calories I already know about exercise and everything like that so it's like anything else that I'm shown isn't really a shock if you know what I mean its like well yeah, I knew that like don't drink soft drink you know that's what the eating disorder is saying umm, but then on like a population kind of level I just think as a whole there's so, like, social media everything, its always just about being thin and that smaller is better so I think its just, umm reinforcing that for people and you know, its not encouraging balance you know, being who you are as a person its like no, the only goal that you should be achieving in life is that you're thin you know, not even really healthy, I guess that last one was trying to show you know, to be healthy but they did it the wrong way (laughs) umm, yeah and I just think it's sad younger people still seeing that, like I know there's people out there trying to you know, make a change and show more diverse body on social media and things like that but, you know when every TV presenter is tick thin or every single model, you know, is thin, and that, that's you know the standard that people are trying to achieve when its not natural for a lot of people I feel like yeah, its just reinforcing that especially through diet you know and restriction so yeah.

Q: Yeah. Can I ask, and this is a hard question and there is no right or wrong answer but you said you don't think they are doing the right way so it sounds to me like you think it is important to promote, whether it be physical activity or you know movement like you said or, a healthier diet things like that, what would you suggest is the right way to do that?

A: I think the right way would be not showing ads that are like "I lost 8kgs in a month" you know, it's like, I achieved a new running PB or things like that like, you know, teaching people that they can like break through barriers *(ineligible)* whether it's physical or mental or you know and just feeling good about, I think it needs to highlight about umm feeling good and also I think more people need to know that just because someone is thin doesn't mean that they're healthy, I think it's, I think that's what they need to promote, I don't think like body shaming should be on thin people either but I also think that people need to be educated that what somebody weighs is not a determinant of who they are as a person and I think more advertisements would need to be out there that are just, show normal bodies it doesn't have to be about being thin umm, and yeah more about a feeling rather than a look, that's what I think they need to emphasise, yeah.

Q: Well put, lovely so that's all the questions I have for you…

(Recorder switched off)

Interview 10

(Recorder switched on)
Image 1

Q: Can you see that there?

A: Yes

Q: Okay wonderful so this is the first one we are going to take a look at umm, if I am just looking down by the way I've got some semi-structured questions, it can really flow wherever you'd like but umm just as some talking points so the first thing I always ask is have you seen this before?

A: No

Q: No okay. Do you think that you would notice it if it was in your environment?

A: Yes

Q: Why do you think you'd notice it?

A: Umm, so, I come from *[removed for confidentiality]* so I am drawn to images that are quite striking and I do, umm, I do sort of look around in my environment at different advertising because it does interest me, umm, I think it's quite umm, clever in what they've done, umm and so for me I go oh that's really quite cool what they've done there. Umm, the obesity word would have caught my eye as well, umm because I am so aware of, umm, all of the focus that is on obesity and how that can often mean that umm there is such focus on eating disorders and with the focus on obesity often umm, the impact that that can have on people who have eating disorders can be forgotten.

Q: So how do you feel, (*ineligible*) as someone who has had an eating disorder and as you said it sounds like you're very self-aware and aware of what goes in particularly in marketing and messages like this but from the perspective not of someone with the history of *[removed for confidentiality]* and the cleverness of it that you see, how do you think you respond as someone who has had a diagnosis of an eating disorder and difficulties with body image and things?

A: I just keep coming back to the fact that it is clever which is a ridiculous (laughs…*ineligible*) umm…

Q: Perhaps feelings, how does it make you feel rather than what you think about it?

A: I think it's, it's very factual so it's, it's a fact so it's, it's quite hard-hitting it's like wow, people who didn't know that umm, I don't have any strong emotional umm, you know from an eating disorder perspective, feelings umm, around it having any negative sort of connotations like there's no sort of feeling of triggering aspect from an eating disorder perspective for me, I just look at it more as factual, these are the facts umm, and I guess probably umm I, I guess some people could umm, disagree with the fact that it is then correlating French fries with obesity, and labelling good and bad foods and we could go down that track, which I don't necessarily think is great because obviously there aren't any good or bad foods, but for me that isn't a strong sort of feeling one way or the other.

Q: Do you think that's because of where you are now and in the past it might have been a strong feeling if you can reflect back?

A: Yes, yep probably. Ah because yeah like definitely in my eating disorder my perception of, of fried takeaway foods umm was that they would umm, you know, ah you know they were bad foods and so I

had you know the idea that you know that was the case and so this would I guess have further cemented that fact in my head.

Q: Sure, lovely thank you for that and I know its hard to say how you would have felt in the past but I think sometimes its good to reflect on how far you might have come and that you can look at this objectively but maybe how you would have felt back then so that's a really good point, umm what about how you perceive, an I know this is difficult as well, but how you would perceive this message, so you have an eating disorder background and a *[removed for confidentiality]*, compared to the general public so if someone was to just walk past this, do you think the general perception will be similar to you or?

A: Umm, I don't think maybe that the general population maybe wouldn't have noticed it maybe as much as I would have, umm having the background that I do, umm possibly umm maybe people and this is just me surmising here but I know when there's ort of anti-smoking campaigns that come out, smokers just sort of like look at them and roll their eyes and move on like, umm and possibly people who umm would be classified as obese may have that same umm reaction I don't know umm a bit of like yeah whatever, we already know that umm, but I don't know.

Q: Yeah, what about your understanding of what you think it's trying to achieve then? What's the point in this?

A: So for me the way that I see it is that they're trying to get people to understand that umm you know being obese can lead to major health umm life threatening complications like having cancer umm which other people may not be aware of.

Q: And relaying that back to the food choices that they've chosen, what do you think about that in the messaging?

A: Well they're definitely correlating food like French fries so takeaway food deep fried food umm with that umm with people who have obesity, who, who are obese, so basically correlating the fact that if you eat those foods, you'll become obese, you could get cancer.

Q: Is that something that you agree with, that tactic?

A: Umm not necessarily because I think that, umm, obesity is umm a result of a number of different factors not just ah, a person's food choices, there's genetics at play, ah movement and umm you know there, everything, as far as I'm concerned everything in moderation so umm, it's not, you can't blame one particular food type for someone becoming obese.

Q: Lovely thank you, just before I move to the next one, would you have any recommendations for improvement or an ad like this in what they are trying to achieve, I know this is sort of double-edged for you because you have a *[removed for confidentiality]* as well so, there's sort of those two sides there but in terms of what you said and the not necessarily agreeing with you know, certain aspects of it, would you have suggestions for improvement for an add type like this?

A: Umm, I actually think, I actually think its quite effective (laughs), I actually do think because it's just so clear and its quite clever what they've done with the play on the cigarette packet, umm, and you know, as much as you know you don't want to say that one particular food doesn't causes obesity with the French fries but then they're perfectly (cigarette)… so I don't, there's nothing, yeah there's nothing that I sort of think, I mean obviously there's different, you know you could get really nit-picky about the types of fonts but I mean.

Q: Lovely, thank you *[removed for confidentiality]*, I'm going to head to the second one now unless there is anything else that you wanted to comment on with this one?

A: No

Image 2

Q: Alright beautiful, so image number 2 I'll just need to zoom out a second so that you can see, so you can see that one there?

A: Mmhmm

Q: Wonderful. Have you seen this one before?

A: No

Q: And do you think you would notice it?

A: Yes

Q: Why do you think that is?

A: Umm, so the word fat, would have caught my eye, umm also obviously the stuff that's all going down her chin, I mean its not, its not a, like you would look twice because its not a usual coco cola ad where someone's clenching their thirst its like what is all the stuff running down her chin so yeah those are the two things that would catch my eye.

Q: What do you think it is that is running down?

A: Umm well they're trying to make it look like its fat.

Q: Okay, what do you think of that?

A: Its quite disgusting (laughs).

Q: And the use of the term fat you said would also catch your attention, why do you think that is?

A: Umm just because of the nature of the work that I do *[removed for confidentiality]* umm, and the fact that you know I have had an eating disorder myself umm and so I am really conscious of the marketing messages and the diet cultures around I'm also very conscious about, very umm sorry, passionate about umm, us changing that really diet culture umm body image obsessed society that we, we have.

Q: So hopefully just wanting to delve into that a little bit further so you mentioned the work that you do, so what is the issue you think with using words such as fat in ads like these?

A: So that is then immediately making people feel like fat is a bad thing that being fat is something inherently wrong with that umm and I think also everybody's perception of what being fat is is quite different, so someone's idea of what say clothing size someone would be if they were termed to be fat versus somebody else's can be quite skewed depending on whether that person has an eating disorder or not or body image issues dysmorphia that sort of thing umm, and I think with the health at every size movement umm, you know it's, it's really important to, for us not to demonise umm and make out that being fat is the worst thing that could possibly happen to you, umm which is what we often

see in gyms and umm even in doctors surgeries you know don't get fat umm and so that's why, that's why that sort of, I'm on the look-out for you know what sort of messaging is out there.

Q: And what about personally, so again I can see you're able to look at this one quite objectively but from personal experience what do you think something like this could have done during the time you were most susceptible?

A: Well it would have absolutely just made me umm I mean there was a time where all I did was drink water but obviously then I was challenging myself to drink other things other than water and that would have just totally made me, made, well it would have just solidified what my eating disorder had always told me which was don't drink anything other than water because tis empty calories and, you'll dr…, yeah you'll have more than you need and so I would have just gone back to if I had been able to challenge myself to drink things other than water I would have gone straight back to just drinking water.

Q: Yep, how does that make you feel then reflecting on the position that you were in then and knowing how many people are in that position now and seeing something like this knowing that it is projected on a population-based scale and it's not umm, discriminating against who sees this?

A: Umm it does make me worry, umm that, umm, you know even young children seeing this who you know have a genetic predisposition to having an eating disorder and may already have those personality characteristics that also kind of really put them in that zone of developing one and then they see things like this and this could be the thing starts, they decide that they're not drinking anything other than water and umm, that becomes a rule and then you know who knows what the next rule is and the next one and before you know it they've got a full blown eating disorder.

Q: And do you think that, again we will go back to the general public, so do you think that they would be bothered by you know you said the term fat and the image of the fat coming down the body, do you think that that would bother other people or more so just those that have the awareness such as you do?

A: I don't think it would bother other people so much, no I don't think so I think some of them might think oh gosh that's a good reminder umm, and I do umm, I'm very aware that umm, people who are in the obese population possible don't have as much education around umm nutrition, and umm especially people in lower socioeconomic umm stratas and things often what they are drinking can be a contributing factor umm, to weight gain umm and to ill health so I think that it, the message is umm, you know fact-based, umm but it does have the ability to, to as I say affect people who umm, affect, negatively affect those who are vulnerable back into eating disorders or disordered eating.

Q: So it sounds like you think there is some validity to the message but the way its delivered could be troublesome, how would you go about, or any suggestions for how you would still deliver that message in a way that might not be so triggering?

A: I would, I'd probably go more down a moderation path rather than, its very much like choose water instead, don't drink yourself fat, so someone would then take that as like right DON'T drink anything other than water umm, so possibly not using the word fat umm, and taking it from I guess, yeah a more, I mean I can't think of what the catch phrase would be or what the image would be right now but more, yeah more of a like umm, a moderation, maybe it might be around drinking more water, umm or just yeah I wouldn't use the word fat and I would, id have it less sort of hard and fast around you know right, pretty much, don't drink anything other than water.

Q: Yep. Any other commentary about this one before we move onto the third?

A: No. Sorry I hope I'm not being like really, I feel like I'm being really confusing.

Q: No not at all! No, and I completely understand what you're saying and I know sometimes it can feel like you're not making sense but it is coming out clearly so don't worry.

A: Okay please tell me if its not because its like oh gosh I don't know how id change that but I, but its not like I can go well id do this image and these words cause its just being presented to me straight away.

Q: Yes and I know its hard so some of these questions its just about what initially comes to you without thinking to much so please don't worry that's great thank you.

Image 3

Q: Umm I'll move to the third now so this is the third campaign, I wonder if you've seen this one before?

A: No. So are these all campaigns that are currently…?

Q: Not current, some past umm, there are, there is one that is a (ineligible) and not all of them are Australian either.

A: Okay.

Q: Yep. But they are real life, have been used. So what do you, what's the initial reaction to this one?

A: Umm, I'm just trying to figure out what they're umm, what the meaning is behind it. I don't immediately umm, like if I just saw that somewhere I wouldn't, I would not know what it was talking about.

Q: Do you think you'd notice it?

A: Maybe.

Q: And what about now that you've had a minute, do you, can you interpret it yet or still a bit of confusion around…

A: Well my immediate, my immediate sort of thought is okay, is it about food swaps, but then I don't really understand what its saying don't stop it. So… yeah I, no, I don't think I, I don't think I've got it.

Q: Yep. So it was umm, intended for the food swaps so suggesting ah quote unquote healthier swaps so instead of just stop eating food altogether swapping it with an alternative.

A: Right

Q: Which I guess um, yeah is a point in itself that you have no context to it and don't really know what its saying, so that (ineligible) in general.

A: Yeah

Q: And then the two other factors so the balloon man obviously and then the measuring tape with the exclamation mark, I wonder if you have any thoughts or feelings around the use of those?

A: Umm, I don't think the measuring tape necessarily looks like a measuring tape. I, like, big, the only reason that I knew that was a measuring tape was because I knew what we were doing today.

Q: Okay

A: I knew what you were researching so I knew it had to have something to do with that. If I hadn't known, I wouldn't have known what that, it could have been like a list, I wouldn't have picked it out as been a measuring tape, that could just be me, umm…

Q: Okay sure

A: I don't, umm, I don't really feel strongly about, about this one at all. Umm, you know to me just looks like a blue cartoon character, umm, I don't feel, I literally have no strong emotion about it at all.

Q: What about the messaging, doesn't have to be a strong emotion but what do you think about that message?

A: Umm, I think, I don't think there's any particular issue with it at all, umm, it from an eating disorder perspective so to speak umm, I, there's a part of me that's like perhaps a little bit misleading because if you are going to swap something then you are stopping eating like are you swapping it for good cause if you are then you are stopping eating something else I guess, umm, but I don't feel that its nearly as damaging as, or could be potentially as damaging as the other couple. Umm… yeah I really, its weird I just have, I'm like 'yeah okay', I don't, but I also, I guess it would be where it is like if that was, but even if it was say in a supermarket I'm trying to think what aisle they'd put it in or by the bulk bins or whatever, if there was still no context other than that I just don't know, I don't know, I doubt its effectiveness that's all.

Q: How do you think you could give context whilst giving this message? What do you think would make it a bit clearer, what it was talking about?

A: Maybe an example of a food swap? Umm, because I don't think the general population would know with the blue bubble man and the measuring take, if they did know it was a measuring tape, what was, yeah.

Q: Fair enough, enough other suggestions for this one?

A: Umm, no. No, other than you know I guess, yeah, offering some different ideas of food swaps.

Q: Yep, alright lovely, we will move onto the final image.

Image 4

Q: So this is the final one, umm, have you seen it before?

A: Yeah, no.

Q: Do you think you'd notice it?

A: Yes

Q: Yep, what, if we go into a little bit about why you think you would notice it?

A: Well because It's so graphic.

Q: Mmhmm. And what does that bring up, the sort of feelings, I saw a bit of cringe there.

A: Oh I'm a very squeamish, I don't deal well with blood or any inner organ type things or yeah anything like that, umm, so…

Q: Apologies for putting it in your face.

A: Oh no no (laughs), I didn't mean it that way I'm just like generally I'm just like eww, umm even, you know what they put on the front of the cigarette packets or whatever I'm often like if its sitting on a table like I turn it over (illegible) umm, I think it's effective cause of the shock factor, umm, I… trying to think in terms of a trigger factor, I guess if someone has an eating disorder and they see that its just going to reinforce to them that they don't want that toxic, so that's you know perfect- plays right into the eating disorders hands, toxic fat, you don't want any of that toxic fat, umm so for someone with anorexia or orthorexia that's just, perfect, because its like right, see the fat is toxic don't want any of that inside me. Umm, so from that perspective I guess there's a danger that it could affect people in that way, the vulnerable, people who are vulnerable to eating disorders, however I do think its highly effective in making people think about what's actually going on inside when you have you know, a visible umm, you know overhanging gut.

Q: So there's yeah, sounds a little bit like those two sides, like you can see the point of it but also the harm that it can cause. I wonder what you think of that then, does that mean, it just sounds to me like maybe there's a little bit of support for it but also a little bit of concern with it? So is that something that you are grappling with with this message?

A: Yeah, it is really, because you know, umm, I grapple with it all the time to be honest because obesity is a massive, massive issue, umm, and you know, it is a massive drain on the public health system but then as are eating disorders, um, and they're continuing to rise, umm and the age of onset is getting younger and you know there are all these frightening statistics around that as well so it's like neither of them can be ignored, umm, and it's, its that fine balance of yes we need anti-obesity campaigning- absolutely we do, but how can we do it in a way that's sensitive to those who are susceptible to eating disorders.

Q: Exactly and I guess that's my whole, you just summed that up perfectly and if I had to tell people what my research was about and things that is the sentence I would use so umm, yeah, the awareness about it and your awareness particularly is, I think throughout these interviews its really surprised me how, how much people can objectify things like this even when they have suffered from an eating disorder and are able to separate themselves and look back at it and see how it can be triggering but also an important message, and I wonder how you think you would have felt back in that time or during that time seeing something like this as opposed to now where it seems like you're able to stand back from it and not really relate it personally.

A: I think, maybe sort of just being like yeah see? Like you don't want to look like that so stay with me and do what I'm telling you because you know that's, that's what you're going to end up like if you stop following my rules and you stop restricting you'll juts blow up like a balloon and you'll have toxic fat, literally that's like, you know…

Q: Yeah, the confirmation there.

A: Complete confirmation that I should stay in my miserable existence with my eating disorder.

Q: Yep, I wonder if, so you, it seems to me like you went straight to the toxic fat part that bottom part is where (illegible) what about the top half we haven't spoken about the grabbable gut and the use of fat?

A: Yeah so what was the question?

Q: I wonder if you think of that and if that is something that also caught your eye?

A: Yeah no it absolutely did, umm, I think the reason the toxic fat probably caught my eye more cause it was the one that made me go eww the most whereas you see the outside of peoples stomachs all the time umm, I think for me I think about standing in front of the mirror and pulling at myself and you know, at parts of myself that I didn't like and umm, pulling myself apart, umm, and umm, you know the uncomfortableness that I felt when my stomach wasn't flat or when I was bloated umm so yeah those are the kind of feelings that I get around, around that.

Q: Does it trigger anything for you now, is it something that is a concern or maybe even sometimes you feel discomfort around is there any sort of sensitivity there with that top message and image?

A: No. No not for me now no.

Q: You're fully removed from it. Which is fantastic, a fantastic thing and I'm glad that, yeah I can definitely see how this could be something that would really trigger people, umm and that fear of weight gain and things like that.

A: Absolutely especially around the tummy area especially for a woman, it's the idea that you know we need to have flat stomachs and wear bikinis and it's like it's not actually genetically possible for a lot of people.

Q: Yeah absolutely. I'm going to get this one out of your face and then just ask some general overall questions about them if that's okay?

A: Yeah of course.

Overall

Q: So, I guess just wrapping up umm, after viewing those images I guess what stood out to me is that, ah, you're hyper aware of the struggle and the battle that we have between both of these conditions and the importance of addressing both of them, that the risk you know, of addressing one can have on another, so this is the challenge that we face and my hope is that through conducting this research and getting these insights and things that I can think about what are ways that we can go about this because it is very difficult to address both without affecting another. So I wondered if in you're thinking you have any ideas or suggestions about how we do combat the issue of rising obesity without potentially affecting those who are susceptible or diagnosed with eating disorders knowing that current tactics are things such as what you've just seen?

A: Yeah I think it's umm, just about being mindful about the language that we use umm, and the campaigns, umm and you know like I said before that correlation between sort of demonising fat umm, and that you are somehow you know, a lesser person umm, if you have a higher body weight all of that sort of stuff cause I think that can be really umm, really damaging, even to people who maybe don't have an eating disorder, but are susceptible, they see a message like that and they internalise it, and that might be the one little thing that they once saw, which as we know anything can set off and eating disorder right, and umm, they might just kind of hold that and that's a little seed that gets planted and umm, you know it's like I don't want to be like that, I don't want to be like that, and then so, you know, and that's how the eating disorder grows so I think sometimes being, yeah, being really

careful about the language that's used, umm, and by the same token you have to be careful of the imagery as well, umm, but, god it's hard.

Q: Yeah, it's really hard. And I see the argument from both sides you know?

A: Yeah because it's like, what they've done with that gut one is good because you're not seeing a whole body so therefore it's not like, I don't mean naming and shaming but you know what I mean, like someone could go but I look like that? And so therefore inherently I am toxic and I am wrong umm, and I think, I don't know the more reading and more sort of I dive into this health at every size stuff and then we look at like the impact of genetics and all of those things it's like, some people what they're naturally destined to be and their BMIs is, you know, sometimes classed as obese but they're actually doing everything right in terms of exercise and eating and all of those things. Umm, what else would I… I actually don't have anything that's like completely coming to mind in terms of…

Q: Yeah and that's fine, I think that's because it is so challenging and it's not obvious and I think that's why it hasn't been done before, umm, but yeah I guess just from the perspective of these campaigns is that they all, ah, do come from government or health agencies and bodies so, what I wanted to focus on in my research is the messaging that does come from those sources that are supposed to be trustworthy and impartial and non-bias, not like weight loss companies or social media, things like that, so, seeing what affect that can have even though they are more trusted organisations and things but obviously as we can see, and, and from what you've said and other participants have said is that there is definitely room for improvement in the way that these are conveyed.

A: Yeah I mean I even think that too, I remember when I was you know in the midst of my eating disorder back in *[removed for confidentiality]* there was a campaign around, and again came from the government, umm around 30 minutes a day you've got to push play, and, for exercise, and I was addicted to exercise and it was all over the TV, it was on the radio, there were massive billboards and to me, that was just like a red flag to a bull see, see, you know when, so when I had to give up exercise completely it was like no, no, I'm unhealthy I've got to do at least 30 minutes a day, like they're saying, its everywhere, and umm, so in that way it's like how else for the majority of the population that was a great message… it was attainable ,it was realistic like (laughs) all of those things right, and it was for kids, for adults, older people, everything, umm, and you know they could, there's no way that they could have made that message less triggering, the message is what it is and it needs to happen but yet that, yeah.

Q: It's such an interesting point, and like you said it can just permeate some minds which is such a high risk but that is the golden question – how do we still convey it but hopefully reduce the harm that you know you've experienced and others have experienced too and that's what we're trying to find out overall and we'll see how we go but thank you so much *[removed for confidentiality]*, that's all the questions I have unless you have anything else to comment on these overall?

A: No, no I don't, I hope that what I have said has been helpful I feel like I have talked in circles.

Q: No not at all, it's been so helpful and what I am noticing is that the more I do of these…

(Recorder switched off)

Interview 11

(Recorder switched on)
Image 1

Q: Can you see that one there, *[removed for confidentiality]*? Beautiful. Now have you seen this before?

A: No

Q: No, okay. Do you think it's something that you would notice?

A: Probably yeah.

Q: Yep. Why do you think that is?

A: Umm, just because it's umm, I mean the word obesity is quite big and umm, I don't know I guess cause they're using like the very like simple marketing but its very kind of iterative of a umm, of like the cigarette package and umm, its just very kind of iconic imagery I guess.

Q: Yep. And what's you first sort of reaction or response to this, thoughts or feelings or what sort of came up for you when I first showed this?

A: Umm, so I guess its kind of like a, if it's true it's a shocking statistic but, it also suggests that umm, being overweight is almost worse than having cancer, or like, and then it kind of diminishes the struggle of cancer and that's like not something you choose and obesity isn't always something you always choose to have and umm, yeah, it's just like comparing two things that aren't really comparable I think.

Q: Mmhmm. What do you think of them using that tactic?

A: Umm, yeah I guess it's like umm, kind of, umm playing, playing on things that could be triggering for some people or like even just mentioning cancer and umm yeah, it's a bit like I don't know what the word is but it's kind of rude.

Q: Yep, so can I ask then in relation to your experiences and things that you've been through in your diagnosis is this something that you personally find triggering?

A: Umm, I think probably a little, but umm, I think I more feel for people who might be struggling with cancer rather than umm just I have a close friend *[removed for confidentiality]* and I know that if she saw this she would have a different response and maybe because I'm so close to her umm, I kind of take on that perspective a little bit but I think that, umm, like the image of the chips and like suggesting that eating like unhealthy food is just as bad for you as like cigarettes, like its healthier for you to eat hot chips than smoke cigarettes, but that's not really what they're saying here.

Q: What do you think they are trying to achieve or what do you think they are saying?

A: They're trying to like, umm, demonise or just like eating in general and like this kind of fast food imagery umm just like demonising it and umm I guess like making it a, a huge like moral and health concern when really its not that big of a deal.

Q: Yep, so that demonising of food and things how does that make you feel based on your experiences with an eating disorder?

A: Yeah well I guess like I demonise foods myself or like that part of my brain does and so every day you try and fight yourself and you so no *(illegible*) its just silly doing that but then if you see this out in real life you're like oh maybe it is the truth and it just kind of reiterates or it like justifies the umm, kind of the bad, or the anorexic thoughts in your brain even though you try so hard to fight them, cause usually they are (*illegible*) but umm yeah, this kind of gives them evidence I guess.

Q: Yep, and is, is that particular food something that you would classify in your brain and steer away from or?

A: Umm, yeah, probably yeah. I think just yeah like I think the way they've used like, like it looks like a McDonald's packet, like just that symbol of umm, like fast food and umm, yeah it's definitely in the 'bad' category.

Q: Mmhmm. And do you think other people would have a similar response to you, those who aren't diagnosed with an eating disorder, or not diagnosed with cancer either, do you think they'd have a similar response?

A: Yeah umm, I would think so, umm, and I guess it just, I don't know its also like knowing this fact even if it is true doesn't really change anything like, you like, this is like an ad like, I don't understand what they're trying to sell here apart from making people feel bad about themselves. Not saying like oh here's some nice broccoli like that will be healthy for you like its saying, it's just basically saying that lots of people are fat and that's not doing anything for anyone.

Q: So you think it, it is making people feel bad about themselves?

A: I would think so cause I think the word obesity has like negative connotations to it, umm, and then when you say that that's killing people obviously that's a bad thing, then comparing it to something like smoking that, is considered more an addiction even though obesity probably has its own addictive parts to it but umm, yeah its really like umm, I guess like moralising or shaming body size.

Q: So, with all of that in mind, do you have any suggestions for improvement for this ad or campaign in particular and it can be anything a small improvement or that you just wouldn't use this tactic as all or, it can be on a scale from get rid of it or I understand the message but it could do x, y and z or?

A: Umm, I guess just having a bit more of a call to action maybe or like something that like isn't just a random fact that's probably not even true that maybe being like, I don't now I guess like for campaigns id say like "exercise for 30 minutes a day" like just like smaller tasks probably are more productive in shaping behaviour change than shaming people's food and body.

Q: Yep.

A: And I just think the link, the umm like comparison to cancer is a bit insensitive.

Q: Mmhmm, so overall would you say you like or dislike this campaign?

A: Umm I would dislike it.

Q: Yeah fair enough, beautiful, any other commentary on this one in particular before I show you the next one?

A: Ah no.

Q: Okay so we will just do a similar thing for all of these if that's alright we will move onto the next one now.

Image 2

Q: So this is the second one, so have you seen this one before?

A: No.

Q: Do you think that you would notice it?

A: Umm yeah. I would.

Q: What is it about it that you think would make you notice it?

A: I think just that I, that image of the like pretty girl drinking soda is kind of used a lot in umm like a lot of drink advertisements umm, so its quite an iconic image that they've appropriated so I think I would like naturally like take note of it a bit.

Q: Mmhmm.

A: (*Illegible*) and then I'd probably like, look straight to that.

Q: Can you say that sentence again sorry? Which…

A: Umm because they've used the word fat I would probably notice that.

Q: Sure, what about it, what do you think draws you to fat there?

A: Umm, I just for me personally and then I think in like a lot of like umm, like just health discourse its umm a very loaded word I think, I don't think it umm, its just not an objective word and its very umm yeah, very loaded and very, has negative connotations and umm, yeah its like a word that I've struggled with in myself like calling myself fat even when I'm not and then umm yeah saying that I feel fat and then you can become fat and that things make you fat just like umm yeah it just, my, I think my eyes gravitate towards that because it takes up a decent portion of my brain sometimes.

Q: Okay, and what do you think the message is that they're sending here?

A: Umm that anything that's not water is bad for you.

Q: Mmhmm and what do you think of that?

A: Umm, yeah I think that's umm, an awful message to send out and umm, I remember when I was sick I used to, or when I was particularly bad I had this weird complex about umm like only taking in water and, and because it was like a very like pure and I just had these certain words that kind of connected to good and bad things and because it was (illegible) and clear and like perfect then everything else was bad and so when I see this it kind of reminds me of that, umm, even like, even drinking an orange juice or something and then soda as well, that, it just, yeah like in my head that automatically did connect to being fat, umm, and then so yeah I think if I saw this like on a bus stop or something it would like instantly remind me of that, and that's like a very specific circumstance (illegible) the purity and the water thing but umm, yeah I am sure a lot of people have similar experiences with these words and umm, yeah.

Q: How does, is that triggering for you still now and does that bring up any feelings or emotions or sensitivities given that that was you know a very specific thing to you and your eating disorder?

A: Yeah I'm definitely sensitive to it and I think like umm, if I was having a day where I wasn't feeling so good and I walked past this that would probably change my food or drink choice for the next, for the rest of the day, like some days would be fine I could walk past and be like that's awful and move on but umm, yeah there's like certain times you can't fight it back as much in your head.

Q: Yep. Is there any, can you distinguish between those days, like do you know when it will affect you and when it won't? Is there any variable there or it's just completely random depending on how you feel?

A: Yeah, its usually based on how I feel like how tired I am, how my body is feeling.

Q: Mmm. Is there anything about, anything else about the ad that you notice?

A: Umm, ah she's a very slim person, umm, which is a bit, kind of contradictory to what they're saying because she's drinking (illegible) but she's thin which is not what they're saying umm, so yeah I feel that was an odd choice for their marketing, then the rethink your drink, umm, it reminds me of that umm, this is really weird but you know at the start of old DVDs and they have like that old you wouldn't steal a television … (*illegible*)

Q: Yeah, no I get that (laughs). So you said how its till sensitive for you and it definitely would have triggered you in the past if not sometimes now, how do you think the general public would respond seeing this?

A: Umm, I wouldn't say that they would be particularly triggered or upset about it umm, cause I think the reason I'm triggered is that it's a very personal experience, umm, so yeah, and I think probably some people wouldn't (*illegible*), and there's a lot of like, in health kind of narrative there's a lot of like water is the healthiest thing for you, which is probably true, umm so its umm, probably has a better message in it than the last one.

Q: Okay yep. Would you say you like or dislike this campaign?

A: Umm I would still dislike it, umm, but yeah like it probably has a better core message than the last one, but I still think they like, the choice of the model is, she's a bit contradictory.

Q: Yep, and any suggestions for improvement then based on that dislike and that you think the message is okay but what would you do to change the things that you dislike about it?

A: Umm, well I don't necessarily think putting a bigger person on there would have helped, umm, I'm not sure what I would do, I think I don't like any of the fonts or..

Q: (Laughs)… Yep

A: Maybe start there.

Q: No fair enough, anything else on this one that it brings up for you?

A: Umm, oh also just the way that it's kind of coming down her neck like its very messy and umm just like, makes me want to vomit a bit so I think that like, kind of, gluttony and like, I don't know I just think its umm, yeah it just makes you feel a bit sick looking at it which I guess is kind of what they wanted.

Q: No good point, I'll move onto the next one if you're ready?

Image 3

Q: Alright so this is number 3, have you seen this one before?

A: No

Q: No okay, do you think you'd notice this one?

A: Umm, possibly, but I'm not, I don't really get it, umm I assume maybe they're talking about like umm, I have no idea, maybe like swapping food for healthier options rather than cutting them out maybe?

Q: Yeah that was the intention behind it that they're trying to convey, what do you think of that message?

A: Umm, it think its probably a healthier message than like a yes or no like you can have this you can't have that umm so I think like for example swapping a… they're probably talking about like swapping a chocolate bar for like chocolate covered nuts or like just nuts or something like healthier rather than not eating or not eating your favourite foods or something so this might have a bit more of like a, it just gets rid of that perfectionist kind of narrative that's often in health that you can, that like if you eat one bad food then you're bad kind of thing, umm I don't really understand the man that's there or umm, or the, I'm guessing that's a measuring tape thing, yeah.

Q: What do you think of the use of the measuring tape and the balloon man?

A: Umm well he looks happy, so umm that's good I think and perhaps not using a human umm gets rid of the, I think it gets rid of the moralising a little bit umm, because he's a bit more, he looks happy even though he's got a big belly um so you assume maybe he's like happy with himself but he's trying to be healthier umm, and then the measuring tape umm, I think they've used it quite objectively so, I think in some circumstances the measuring tape can have negative umm imagery or symbolism but I think here it just, I don't find it triggering at all for it to be there, and I think perhaps because they've used this balloon like animated… (*illegible*)

Yep. So what do you think of the overall message then that they're going for?

A: I think it, yeah I think it's a good message to like just be more umm, like you, yeah that you don't have to completely cut things out and that you can just swap things umm, and then with swapping there's, it just feels a bit more neutral and this has nicer connotations than like *(illegible*) and stopping and umm, I think its just a nicer word to use, and yeah promotes a healthier relationship with food and that you're not saying somethings good and somethings bad or that you have to stop eating something but just that you can swap it for alternative or maybe have it sometimes but then swap it out for healthier options other time.

Q: You mentioned the measuring tape in this instance is, you find neutral, what would be a circumstance or a situation where you don't think it would be so neutral?

A: Umm what comes to mind, I don't know if this was like an actual campaign but there was like, I just remember seeing this image of a girl like holding a measuring tape around her waist umm, so I think something like that that's kind of more like a very specific to what they're talking about umm, than like with it being on a woman's body or just like a humans body umm, I think it makes it more relatable and you see yourself there and therefore I think it moralises a bit more and it makes you kind of want to think about your own waist and grab it a little bit and, but I think that's when it's not a neutral use of the measuring tape.

Q: Sure, do you think others would have a similar response that you do which is umm what I'm grasping is a real positive with the message, do you think that would be similar amongst the general population?

A: I would think so but I do think it's confusing, like I had to actually think about it before I understood what it was, if I was walking down the street and I saw that maybe I wouldn't think about it because I just didn't get it straight away.

Q: Yep, how do you think you could improve it to make that understanding more immediate?

A: Umm I think, again this would probably then moralise the food choice but I think having a food item there or, or like maybe they're meeting exercise like instead of sitting on the couch you can go for a walk or something so maybe just like some comparison of that specifically what they're talking about umm, but then to do that would also kind of demonise something, umm…

Q: No good point, beautiful, is there anything else on this one *[removed for confidentiality]*?

A: No

Q: No okay, we'll move to the last one now.

Image 4

Q: Alright, so this is the last image, have you seen this before?

A: No

Q: Okay, do you think you would notice it?

A: Yeah, for sure.

Q: Can you elaborate on that a little bit for me?

A: Just umm the bottom image is gross and so I just naturally look at things like that, umm and then the top image the like pinching of the stomach umm, well I think I would notice that like just anyway and that a normal person would notice it but umm, I think it just like makes you want to like, I just grabbed my own belly just then, it just makes you want to like kind of grab your own belly and feel the fat there and umm, yeah I find that very kind of jarring to look at.

Q: Yep. So you actually just grabbed your stomach then?

A: Yeah, yep

Q: Why do you think that you did that you know what was that response for?

A: I think just, I'm not really sure why I do it but I just umm, I guess its just like a way to check, like a body check kind of thing like check that you're I don't know not that I, I know I don't look like that but just to kind of feel the umm, you kind of feel your fat and umm yeah I don't know if its like a purposefully like you try and trigger yourself but just like umm its just something I've always done when I'm either not feeling good or umm yeah just like I'm not really sure what the, if there's a word for it or if its normal but like umm, I find myself often like when I see stuff like this like grabbing my own belly and like, I don't know if I'm checking or anything but just, umm I kind of want to mimic what he's doing. Mmm, just like, feel the, my belly a bit and yeah.

Q: What was the feeling that you had when you just did feel your stomach then? Was it confirmation you're okay or what was…?

A: Umm probably the opposite just like, oh like, oh I have fat on my belly and like, not in a good way, umm yeah. I don't think it's a positive response at all.

Q: Yep. So I hope you don't mind me diving into that a little bit more *[removed for confidentiality]* cause that to me is a really, really interesting response and that you particularly did that right now as an immediate reaction to seeing that, what feelings came up for you when you did that just now?

A: Umm just that I probably umm, like there's one part of my brain that umm, sorry I don't often verbalise this…

Q: No that's okay and if its too much just let me know.

A: No its okay, umm that I could lose weight, that there's weight to be lost there or like exercise that could be done, umm, yeah and just that you know if you have a grabbable gut like they're saying which everyone does you can literally grab any part of the body, umm that means that my insides look like that and therefore I'm very unhealthy, umm, so yeah I don't, its not a very umm, nice feeling at all, yeah and I'm umm, just umm, yeah I think sometimes I would spend hours in front of the mirror just like grabbing or umm, just feeling different parts of my body umm, and yeah it was never really a nice, it was never, you never kind of leave it being like okay yeah I'm fine.

Q: Mmm. Do you think there'd be any actions or anything that come from that?

A: Umm, yeah, I think I would probably restrict my food a little more or just like be a little more self-conscious or maybe go and do an ab workout quite soon after umm, yeah I do find this quite triggering I think the imagery of that, like that grabbing umm and then the suggestion that then you can grab, umm, that there's that fat, umm, and its unhealthy…

Q: How long do you think those affects would last? I know that's a hard question for you but that feeling of wanting to do something about it?

A: I guess until I get distracted by something else really.

Q: Okay

A: Yeah and sometimes like I said before, some days are harder to push back than others, and then these kind of things I feel kind of sit in your brain a little bit and then like (*illegible*)- I would think back to this and then think back to that time two months ago when something else happened and then just kind of connect it all then feel worse the next time a little bit. And then just yeah, that the bottom there is like eating less and moving more umm I think I would take that to quite an extreme, like I think that most people would look at that and be like 'oh yeah, just don't eat dessert and go for a walk every day but for me that's like eat nothing exercise for hours umm, so I think like obviously that's my brain taking it in a more extreme way but just using that language like eat less move more umm its very umm, just like a bit extreme like this and this.

Q: And the bottom half, so you, it's the top half mostly that you've focused so the grabbing, what about the bottom half, does that contribute to it and something that bothers you as well?

A: Umm, probably less so, umm I just find that it's gross to look at but I think probably most people would umm, but yeah I think just calling it toxic fat umm, like one I don't even know what that actually means but then that use of the word fat, even though that is scientifically, I guess that's what

they call it umm, for me that has different connotations. That's not fat as in a noun that's like an adjective in my, yeah, umm so yeah, and I know they're talking about heart disease and diabetes but I don't even really notice that at all here.

Q: Mmm. How do you think others would feel looking at it and perhaps not from an eating disorder background?

A: Umm I think they'd probably still feel a little bit gross, I think that's kind of what they were going for a little bit with the image just to kind of shock people, umm, but perhaps umm not take it as such an umm, I guess I take it quite personally like a personal thing and it probably wouldn't affect them for the rest of the day, or maybe if they are at risk of these health conditions (illegible), maybe I should check that out umm, but yeah, yeah.

Q: So then, I am feeling there is an overall dislike for this? And out of the four of these is this the strongest for you? And likely perhaps to stay for a little bit longer?

A: For sure yeah.

Q: Alright I am going to get that out of your face *[removed for confidentiality]*. Again I am really sorry for the sensitive nature of that one. So that's all the images that I did want to show you, umm what I might do now if its okay just for the last 5 or so minutes is just ask you some questions about them in general?

Overall

Q: So I guess the first thing I wanted to ask you some questions about them in general. So I guess the first thing that I wanted to ask is how you feel overall after seeing these for the past half hour or so?

A: Umm, yeah I feel good but I just think it brings up a lot of things just, well one just to think about it in general how health is marketed to people, umm but then also for me personally about my relationship with my body and with food and with health in general, umm, yeah.

Q: So what do you think of the fact that you've identified what its done to you and how you've felt afterwards that these are projected on a population based scale so unfortunately it's not really selective about who sees them and like you said it could be on a bus or TV advertisement or something like that, how do you feel about that?

A: Yeah I mean I know like if I saw this kind of stuff on my worst day like, that would be (*illegible*) and so you don't know what people are going to see it and umm, even though perhaps majority of the population would just walk by and not think about it, I would think that there is a group of people and I think especially like umm well, just like generally eating disorders affect young women and so young women walking by seeing this umm, I think they just kind of take it with them in the day a little but more and I think umm I don't know you just don't want that kind of messaging to become a part of everyday interactions and I increasingly, maybe not increasingly… as I've noticed as I've grown older umm the way, just women's relationship with food in generally does follow a lot of these tropes in the health industry that really moralise and demonise certain foods umm, and I think that comes from this everyday, they see it on the bus and so its normalise t consider that like eating hot chips is bad and umm yeah I think the more you see it the more you, maybe not internalise it, but at least you carry it with you and then maybe you start speaking about it and then other people hear it and then eventually like your daughter hears it and then it just becomes engrained in how we talk about health.

(Recorder switched off)

Interview 12

(Recorder switched on)
Image 1

Q: First image up. So I will just confirm that you can see this one?

A: Yep

Q: Okay wonderful so first thing I usually ask is have you seen this before?

A: No

Q: Okay, do you think that you would notice it?

A: Yes.

Q: Okay lets go into that a little bit further so what are the main reasons you think that you would notice this?

A: Umm mostly because of the big obesity sign, umm I think that, that would, like obesity is not a trigger for me but definitely with the work that I've done in the bopo space and on myself its not a word that enters my daily life a lot, and one that usually brings negative connotations ah, especially, even though I work in *[removed for confidentiality]* I'm like uh, there has to be a better word, umm – sorry I'm just reading the text, and then it makes me mad because obesity from the research I've done, obesity isn't a killer, there are other comorbidities and other diseases in and around weight and there responsible for killing people and obesity and size of someone's body is not an indicator of health, you don't know what's going on on the inside.

Q: Except for madness, are there other feelings and emotions that come up upon first glance of this?

A: Umm definitely after I've read the text it makes me feel bad about myself, umm cause I know that a lot of people, particularly medical professionals, umm if you ask them if I looked healthy or not then they would definitely say no, like you look like you'd probably be at a high risk of diabetes and heart failure of all that kind of stuff, and I am but that's because of my family history not because of the size of my body.

Q: Yep, what other things do you notice about it besides that- the text there?

A: Umm I think the correlation between obesity and smoking is an interesting one, uh because you can't, for many people, you cannot help the size of your body and umm, smoking is an addiction but it is definitely something that you can stop for the most part, and I think that they are unfair comparisons to make, because you're essentially implying that I can lose weight to be able to be healthy umm, just like someone can quit smoking and trust me I've tried (laughs), and it doesn't work, and yeah so I think the comparison is quite unfair.

Q: Yep, so you mentioned that umm, it makes you feel bad about yourself, in what ways, what are some of those emotions that come with that feeling bad about yourself?

A: I think, for a start it makes you question your self-worth, because a lot of people put plus size people into an obese category and think that they're worth less or they're a drain on the health care system because of the size of their body which is something that they should be able to control, umm and also, there's an element of self-doubt in there, even though I've done so much work on myself, about whether or not I am doing the right thing by living my truth and not trying to lose weight, umm,

and then I guess there's an element of fear in that as well, that then if it is true then I am putting myself at risk.

Q: Yep, and do you think your history and being diagnosed with bulimia I believe it was, affects how you interpret and understand this campaign?

A: I don't think it's the diagnosis nor the disease itself umm, but the work that I have done on myself after that, so I did see a few different psychologists around umm food, and how to like, during my recovery process, but I didn't discover body positivity *[removed for confidentiality]* after I stopped seeing a psychologist about my eating disorder and I don't recall a psychologist ever saying to me, like referring to like body positivity or the body positive community or anything like that and that's where I got my information from and umm, became more woke to stuff like this whereas psychologists were more about like cognitive behavioural therapy and that kind of stuff.

Q: Yep. Do you think there is a difference between how you read it now and how it affects you now and how you would have before you had those learnings and worked through those things?

A: 100 percent, I think that if you had of shown ED me or me just after I umm went through all of that, this photo would have made me feel terrible about myself, and now it, like there's a little bit of discomfort in there but mostly its just angry that stuff like this exists.

Q: Yep, with that you said it would have (illegible) a lot more, would that translate into anything or trigger anything or its more just that feeling of terrible that you described?

A: I think what it probably would have done was made me watch what I was eating for a few days, and even if it was subconscious umm yeah, that it would have made me more aware of my body.

Q: Yep. So I also wanted to ask, I understand your interpretation and how you perceive it, and this is a tricky question to answer because we don't know how other people think, but how do you think the general public would respond? Not with a history of an ED that you have and not with the understanding and the work that you've done about the body positive community that you talk about and research into obesity and things?

A: Umm I think that most people would look at this and they'd agree with it and they wouldn't even think to question it because we are so, we are always taught that being fat is bad, umm, and information like this and campaigns like this are so common that umm I don't think, I think it would make fat, other fat people feel bad about themselves regardless of umm whether they had an eating disorder or not, and I think it would make people who weren't fat feel better about themselves and the way that they live their lives.

Q: Yep, how does that make you feel then considering those things?

A: I think with regards to fat people it's a shame, because nobody deserves to feel bad in their bodies, umm and that's why *[removed for confidentiality]* because I really like, I want to make everyone realise that there's no right way to have a body, umm, and I think for the skinny people it makes me feel kind of bad for them, that that's the, like the narrow view of their scope, and I think there's also a sub-category in like the thinner-small body people in that there are people in that category who are actively trying to not be grouped into the obesity, obesity epidemic so they're trying to lose weight and they are forcing themselves to be in smaller bodies, and I feel bad for them, because I know what a taxing and arduous process that is.

Q: Yep, definitely, and the last thing I wanted to ask about this one before we move onto the others is, what do you think the overall aim of this is?

A: I think the overall aim of this and particularly this advertising set out like this is to scare people, because we are so used to cigarette packages, and then the cigarette packages with the graphic images and they're supposed to stop people from smoking, and so then this is a visual aid and then you relate it back to that, basically (*illegible*) we are going to die.

Q: Do you have any recommendations on how it can be improved then based on the feedback you've given?

A: I think, I think that it accomplishes what it sets out to accomplish, as a marketing campaign I don't agree with it but as a marketing campaign I think its actually quite effective, so for them, the company or like whoever it is, is it the health department? It accomplishes what they want it to accomplish but I think there needs to be a change in messaging and that people should be getting regular health checks and people should be getting their required amount of exercise and moving their bodies and eating good, like nutritious food rather than focusing on the size of someone's body.

Q: Yeah wonderful, lovely feedback there alright, so I am going to move onto the next one if there is no more commentary about that?

Image 2

Q: Beautiful, so this is the second image and we'll just follow some similar questions if it loads for me hold on, okay can you see that one there?

A: Yep.

Q: Have you seen it before?

A: No.

Q: What's your initial response?

A: Like umm, when you see the old school posters of women in the household, like make your wife happy make sure she is in the kitchen, and they're infuriating… this is just as infuriating…

Q: Except this is not that old…

A: Yeah exactly right, this was probably printed yesterday… umm I think, I think the first thing that I think aside from anger when I look at that photo is that she has made a mess of herself, and she's spilt her drink on her, and basically two things - the first thing is that if she was a fat person, people would call her disgusting because she's made such a mess of herself, but also that's the point – they're trying to make her look messy umm, and say you know like you don't want to be like this.

Q: Yep.

A: And the fact that it's a drink and its got chunks makes me think that its fat right? So she's drinking fat, umm, which is just gross and, *[removed for confidentiality]* like its gross and its slimy, nobody wants to drink it… its an unnecessary, its unnecessarily graphic.

Q: What else about it do you notice?

A: Umm, she seems to be enjoying herself which I highly doubt (laughs), the don't drink yourself fat- so I agree with the premise of encouraging people to drink water but also its, its making, its weighing in on this, there's a good type of food and there's a bad type of food, its moralising the drink she's got

in her hands, and that kind of thinking is really harmful, particularly people with eating disorders, there is no such thing as a good food or a bad food, umm and I think that the narrative needs to be changed around that because otherwise, that's why we get those comments in the tearoom like I'm being naughty today I'm having a slice of cake, then you've got the person eating the cake being like oh should I not be eating this? Um if you take away the moral value of food, because there shouldn't be any, it would make conversations around health and wellbeing so much easier.

Q: Yep, does this one have an impact on you at all?

A: Umm, not on a personal level, not as much as the smoking for some reason, I think that it's a ridiculous concept but it doesn't offend me and it doesn't make me feel bad about myself like the other one did.

Q: Yeah, what about other people umm diagnosed, previously or currently, with an eating disorder?

A: I think If you were a big soft drink person then it would probably, like if you like to drink soft drink then it would probably have more of an impact on the way they felt about themselves, I drink soft drinks as a mixer in like cocktails (laughs), umm but I think that, I think the graphicness of the fat, cause you kind of have to look at it twice to realise what it is, cause in the first instance it looks like its just soft drink but once people realise what it is it would probably make people in bigger bodies feel quite bad about themselves and like their gross.

Q: Do you think then the general public would perceive it differently or similarly?

A: I think this image is weighing into the general public thinking that fat people are gross, but I think, I don't think it's actually providing any benefit or encouraging people to drink water, I don't think its getting, as a marketing tool its not really getting its point across because you're focussed on the grossness of it all rather than the water, so I think it would be a much more effective advertising campaign to have her drinking a glass of water, and taking away the fat, cause right now it's just distracting.

Q: Yeah, what would the message be then, because you've said it would be better to have her drinking water and I do understand the message of trying to get people to drink more water so what kind of message do you think would convey that without the concerns that you have present in this one?

A: I think that even if she were to stay in the same pose and be dousing herself in water then that, the message would be just to drink more water like, they could even, I'm not a fan of healthy, but they could even keep the be healthy drink water umm and still have her looking like she's having fun or like ideally you have a group shot of everybody drinking water and have a diverse range of bodies in there, umm, like swimming in water? I don't know but it's an ad about water and there's no water in it (laughs).

Q: That's a really good point. Wonderful, is there anything else about this one? Any feelings that come up? No? Alright I'll move onto number 3.

Image 3

Q: So this is our 3rd image, you can see that one?

A: Yep

Q: And do you think you'd notice this one?

A: No, like it doesn't, what does it mean swap it don't stop it? I don't understand.

Q: (Laughs) Its been a common response, so the idea is make food swaps instead of just cutting out food completely.

A: Oh, umm, which like, its not a bad concept really, but I don't think this advertisement conveys that at all.

Q: What is it about it that you don't think is really conveying that?

A: Well there's no food in it for a start, umm, and its, it's a campaign about food so there's no food and also, like this sounds silly but the balloon person like is gendered to be a man and ah, like bigger men don't elicit the same response as bigger women so its not really umm, a shocking advertising campaign and then the tape measure down the side I understand to like help shrink your waist or whatever but it's not really, I don't know it's not effective.

Q: What do you think of the use of the tape measure?

A: Umm I prefer tape measures to scales…

Q: Okay why do you think that is out of curiosity?

A: Umm well, because *[removed for confidentiality]*, umm but even I think people who are still very stuck in diet culture umm, the first thing like when *[removed for confidentiality]* and ask how do I start I'm like throw out your scales you don't need them, and then some people still measure themselves, which is still like not great but it's a step, so its more positive, umm and yeah so I own a tape measure but I used to track my measurements and I don't do that anymore but I used to have a journal of like every month I would measure myself of fortnight or whatever, so for me like tape measures aren't bad but they're not good, they're kind of neutral.

Q: I just wanted to touch you said larger men I think you said, aren't perceived or the same way as larger women, what did you mean by that?

A: I think as a society it is more acceptable to be a larger man than a larger woman and I'm not saying that men aren't subjected to body dysmorphia and societal pressure because they are but if you're a chubby guy, then you're seen as cute, you know like you've got that teddy bear factor going for you but nobody thinks that when they look at a chubby woman.

Q: Yep, lovely insight thank you and just going back to the message swap it don't stop it so you said that you don't mind it, why is it that you don't mind this type of messaging?

A: I think I don't mind it because tis confusing (laughs)… its not overtly, I don't mind the message of swapping out foods like, it's a, I do but I don't because its encouraging a diet, which we don't want people to be doing, but as far as diets go at least they're still encouraging you to eat.

Q: Yeah fair enough, and do you think this is a general kind of response that most people would have? How do you think, again, someone without disordered eating experience and like you said the understanding of I think you said that umm, we don't want people dieting and things like that, people who don't have that same attitude, how do you think they would perceive the message?

A: I think that swapping out your food is probably well received by most people because most people would look at your dinner and say like oh you know you could swap that mashed potato out for sweet potato, or you could do that or this so that it's more nutritious, like you could swap it out for better

foods so I think that most people would react well to this kind of marketing, and I think that its umm, its diet culture (illegible)… its sneaky diet culture.

Q: Okay yep, and lastly and recommendations for improvement for this, you said that you don't get it really, so how would you improve it?

A: Umm, well, from a marketing perspective I would put food in it so you understood that that's what it was about, and make it less about the measurements umm, and instead make it more about eating nutritious food.

Q: Beautiful thank you so last one coming up, I will scroll to this one and just a warning it is a little bit graphic.

Image 4

Q: So this is the last campaign, have you seen this before?

A: I haven't and its so not accurate (laughs).

Q: Do you think you'd notice it before I dive into that statement?

A: I would yes.

Q: Based on which factors?

A: Umm, so two – the first being that obviously its an anti-fat campaign and umm I just find, I notice those kinds of things more now its like driving a red car then you see red cars everywhere, but also as a *[removed for confidentiality]* because I would see that kind of photo and the second image is taken via laparoscopic surgery, that's the only way you can get this kind of image so you've stuck a camera inside someone and inflated their abdomen and that's not really like, anyone's abdomen can look like that, because that is, it's peritoneal fat and the fat that's on my body you've, you've got a layer, like your peritoneum umm, is separating the fat that's on the outside – your adipose tissue on the outside – to the fat that's on the inside, and so skinny people can have that amount of fat on their internal organs as well. So, umm, but no, most people don't know that.

Q: Is that where that statement that you said is inaccurate? Is that where that came from? Knowing that that could actually exist on anyone?

A: Yeah because you might have insides that look like that but you might look like, have insides like that and so might I, you know.

Q: Yep, what else about it?

A: What else does it say?... Heart disease, type 2 diabetes and cancer- love it, standard, umm I think its more believable because it does have the umm heart foundation and the cancer council ticks down the bottom umm…

Q: Any commentary on that?

A: (Laughs)… I think, I don't know do you know what it was for? Like when it was put out?

Q: This isn't that old, it's one of the most recent and this one's Australian as well, some of the others weren't, umm yeah, last, definitely within the last 10 years and was the whole live lighter campaign but these are more recent, and there's been television commercials as well in the past two or so years.

A: I don't watch free to air TV and I am so glad (laughs), I think that using, having organisations like that umm, back up your advertising and their logos gives your marketing campaign a lot more credibility umm and people pay a lot more attention to it, so if I were to go on TV and try to argue this advertising campaign, guarantee someone would throw it back and say no but its got the heart foundation tick, its supported by them, umm, and so I think that foundations like the heart foundation, cancer council, need to be more aware of what they're putting out there because there's nothing wrong, absolutely nothing wrong with encouraging people to look after themselves and to lower their risk od diabetes and heart disease but this is unnecessary, its too graphic and is going to do more harm than good. My main thing, as *[removed for confidentiality]*, as a whole person, and advertising campaigns like this don't take into consideration anything except for the amount of fat that somebody has on their body, doesn't even treat them like a person.

Q: You've commented a lot on the second image the internal, does the top half elicit any emotions or feelings from you at all?

A: Not really negative emotion, I think I'm, I'm pretty proud of where I am as far as body neutrality is concerned, so seeing that kind of image would probably make me feel uncomfortable 5 years ago, umm, but now I'm quite at peace with the way my body looks, and so I can do that to my body, so it doesn't upset me, it upsets in conjunction with the other image and as a whole, but not that individual image by itself.

Q: When you say you know 5 years ago it would have made you uncomfortable, in what sort of way?

A: Umm I think 5 years ago I tried to hide my body a lot more, umm, I only started showing my midriff about 2 years ago, and now like Ill go topless at festivals and stuff like that like I'm a completely different person but 5 years ago I was very subconscious, like body conscious, and then always try to wear dresses and things that didn't cling to my body, I very rarely wore pants, because I wanted to distract people from that, so everything was low cut, so that people were looking at my boobs rather than (*illegible*) (laughs)…

Q: What about other people with a condition like yours… how do you think, sorry when I say condition like yours I mean a diagnosis of an eating disorder is what I mean there, would perceive this without the processes and things that you've been through?

A: I think that they would find it really triggering and that its actually really damaging advertising campaign.

Q: Mmm, is there anything that still triggers you in any way or you feel you're well past that?

A: I think the text, its not, its not triggering so much as like it doesn't, this ad doesn't make me feel bad about myself at all, but it makes me angry because particularly the text grabbable on the outside means toxic fat on the inside, its such strong language, umm, and has the potential to do so much damage to people, umm and I think that yeah, I don't, I don't think its appropriate.

Q: Do you think that the general public would have that same insight? Or how do you think they would respond? You know I've said these are in Australia and they can be displayed on ads or billboards or whatever it might be just going about their day and seeing something like this?

A: I think that some people would feel really bad seeing it, and then other people would feel really justified in their lifestyle, you know as in people who live very healthy lifestyles and who are quite thin and exercise a lot and eat well, they would look at this and think yes I am doing the right thing, and then other people would look at it and kind of shrink inside and feel quite bad about themselves.

Q: What would you do to improve it then?

A: Umm, throw it in the bin (laughs)

Q: That is an answer you can say that (laughs)…

A: Absolutely I would, I would start from scratch, I think that the person who came up with this concept needs to be sacked, or (*illegible*) educated, because I think that there are more efficient and effective ways of advertising umm, health and how to decrease your risk of heart disease and umm type 2 diabetes and stuff like that so why not show a photo of various people and various bodies exercising or umm going for a walk or something like that umm, and showing body diversity not just the two straight size white people like jogging down a path umm, yeah.

Q: Lovely, alright, I am going to get to get this one out of your face. So that's all the images that I wanted to show you, and with all of that in mind just wanted to ask how you're feeling after seeing those 4, is there any, eliciting any emotions or response or?

Overall

A: Umm, I'm a little tired (laughs)… I think that there, like seeing anything like that that's upper triggering but also having these conversations, as valid and as amazing and necessary I think that they're quite taxing, umm when, so I do a lot of *[removed for confidentiality]*, and when we ask people in marginalise bodies and minorities and minorities to speak we always pay them, because, and this is only something I became like, cognisant of, maybe 18 months ago, was because when you ask people to share their stories like that, because its so emotionally draining, people deserved to be paid for that, which I know you're doing that's not my point, my point is that its taxing to dredge up that kind of stuff, and I'm not a person that ever, like that tries to block out that part of my life, but also its not a part of my life, I much prefer the me I am now, so its not a part of my life that I revisit a lot.

Q: Yep, definitely, and I guess, just to wrap it up, I generally ask at the end because I don't want to sort of try and get people to try and say something, but I guess knowing that, and we spoke about it in the last image because there were those logos and things like that, but knowing that these are broadcast on a population-based level, there's no discrimination in terms of who sees these, so they can reach audiences such as people at risk of disordered eating or with an eating disorder or previous diagnosis or whatever it might be, that that's the way that these messages are broadcast, if you have anything thought around that as a strategy for what their trying to achieve?

A: I think that society has a long way to go as far as accepting people in all sorts of bodies and so I think that, its interesting because I've done a bit of *[removed for confidentiality]*, all of those campaigns, except for the swap it out one, are quite effective in their messaging but I think that umm, I think that some work needs to be done with those kinds of organisations to change the messaging, umm, because they don't, they try and help people and I understand that and particularly the cancer council, umm you know they put in so much money and resources into trying to end diseases like cancer, and heart disease, and stuff like that but mental health is something that's quite often overlooked, and I think one of the positives at the moment in going through this pandemic is that there's such a huge conversation around mental health, because its really affecting all of us, and so I think that if I could change anything, I would go and educate, get people like the butterfly foundation and those kinds of organisations to go in and educate those businesses on the effects that those advertising campaigns are having and have consultants and things so that they can make them more

inclusive and less damaging, because you don't know what everyone else is going through, and so having those kinds of images can really affect someone.

Q: It's amazing what you've just said because you've fed right into my hands…

(Recorder switched off)