MONASH University

The role of peer connection in Australian general practice

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ABSTRACT

Background. There has been little study of the relationships between general practitioners (GPs) and the purposes of these at-work relational alliances. This study is situated within the general practice workplace requirements and functions. The study reviews the experience and roles of an informal peer-connected relationship for work performance, wellbeing and learning. The aim was to explore the roles of peer connection in the working lives of Australian GPs.

Methods. This is an exploratory qualitative thesis study that explores the workplace of general practice. The workplace is viewed through a constructivist-pragmatic and relational lens to establish the role of GP peer connection. Reflexive thematic analysis using inductive and deductive reasoning interprets the results of interviews with 29 participating Australian GPs.

Results and discussion. New findings include a cognitive and affective learning network, a hypothesis of a clinical theory of mind and sustainable work practices for Australian GPs. Peer connection is an informal educational, resourceful and resilient relationship that establishes a knowledge-management system within Australian general practice. The humanity of the workplace is highlighted, with the role of affect in cognitive scientific work described as an asset to patients and to practitioners. Human relationships at work are purposeful, practical and a resource for quality improvement processes within medical practice.

Conclusion. Peer connection is an informal, individual supervision construct that improves clinical and affective knowledge management for a GP using a personally selected and graduated "relational experience" with other GP peers. By using this relational construct, GPs' wellbeing, sustainability and situational learning are effectively improved and thus the challenges GPs face are better managed.

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, 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.

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PUBLICATIONS DURING ENROLMENT

2023   Sturmberg JP, Hogan C, **Price K**. A sustainable vision for general practice: understanding the challenges. *Aust J Gen Pract*. 2023;52:143-8.

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Chapter 2: Literature Review presents a narrative literature review of GP relationships and where they occur in the workplace. This chapter explores supervision models, relationship theory and psychotherapeutic theory related to GP relationships. There is a detailed definitional exploration of major contributing concepts used within the study. A scoping review conducted at the beginning of candidature is presented as Appendix One.

Chapter 3: Methodology details the qualitative approach used and the underpinning constructivist principles and pragmatic influences on this work. Rogerian theory and its tripartite framework[1] are described and the chapter details the approach to exploration of the social constructionism of peer-to-peer relationships. The authors position within the context of research is described and the perspectives she brings as a working Australian GP. This chapter also details the research design and rationale for the use of an explorative approach and reflexive thematic analysis. A systematic exploration of other qualitative research designs is described. Because this is an unexplored topic on human relationships in the medical workplace, an open emergent and exploratory design was therefore chosen.

Chapter 4: Methods details the techniques of research applied to answer the research questions. This chapter provides a description of how the participants in the research sample were identified, recruited and approached, the process of the semi-structured interviews is described and the steps taken in the thematic analysis. Thematic mapping and interpretive reflexivity are described

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[1] Rogerian theory components: empathy, congruence and unconditional positive regard.

comprehensively as techniques for data analysis and theme building. Steps taken to ensure rigour and trustworthiness in the work is described.

Chapter 5: Description of Participants and Results presents the GP participants' demographic characteristics and the analysis of semi-structured interview data answering the research questions as three themes in relation to what peer connection is, how it works, what it does and how the context of Australian general practice can support it. The three main themes are named as follows:

1) navigating to the resource of GP peer relationships

2) inside the peer-connected hive mind and the GP dialogues

3) resourceful self-efficacy as a sustaining practice and as the good GP

Chapter 6: Discussion presents a critique of the evidence presented within the thesis supporting an informal supervision concept which supports GP knowledge demands. This chapter also presents the hypotheses generated by the research including a clinical theory of mind. There are various threats to progression through the clinical theory of mind and these are discussed in the context of practice and how this fits with, and adds to, existing theories combining education and relationship work. Further research needs are highlighted with implications discussed. The research questions are addressed throughout the thematic discussion.

Chapter 7: Conclusion describes the clinical and policy implications of peer connection for the medical workforce and the general practice workplace. The research questions summarised and addressed explicitly. Limitations of this research are described.

CHAPTER ONE: INTRODUCTION

This is the introductory chapter of a qualitative thesis describing a novel concept called peer connection. Firstly, I describe observations from clinical practice as a general practitioner (GP) in Australia, especially aspects of isolation and its remedies but also learning networks, then situating this within international evidence through the US National Academies of Sciences, Engineering, and Medicine model for clinician burnout and wellbeing.[1-3] Secondly, the context and setting of Australian general practice as a function of the Australian health system are explored. Thirdly, the rationale of this research is detailed, followed by the aims and research questions.

The evidence on peer connection for GPs is limited. Peer connection appears to be similar to theoretical relational frameworks or informal supervision models and may influence work performance, wellbeing and learning. The informal supervision may be operating within learning environments as a simultaneous activity. This is the first study to qualitatively define peer connection, its individual mediating factors and its role in supporting GPs in their work.

1.1.0 INTRODUCTION

A reflection of my work in clinical general practice suggested that peer relationships for GPs were informal, active, engaged, purposeful and specific. I am a GP who has worked mostly full time including roles as a clinician in practice ownership, medical education roles and conference organisation. I've had a lifetime of corridor consultations, and lunch room discussions, with both tears and laughter. I've run small group gatherings of previously unknown GP colleagues to support them and develop clinical knowledge in my local area for two decades. I also organised conferences where free networking time was given and my close observations in all these areas contributed to the initiation and formulation of this doctoral research. In the last decade I have actively contributed to social media in a professional context, developing a large online GP learning, advocacy and support forum, where social media provided an extension of the informal GP workplace.

Contextually, peer connected relationships to me seemed to occur very often in informal learning environments within the workplace. It was my observation that there were multiple workplace learning needs addressed within a very specific, positive and active peer relationship that could be called "peer connection". The functions were addressed simultaneously learning and therapy, or even learning was therapy, indeed the literature suggests there are common frameworks. (4) The relationships I observed were protected and often carefully guarded due to the implicit value of peer connection for the individual GP. I observed a strong protective reaction to these relationships. Yet the awareness was not directly of the relationship but of the almost invisible means of facilitating work performance. I observed over many years how the concept of relationship-facilitated workplace learning needs was overloooked, yet at the same time the (invisible) relationship was protected. Therefore, my reflexive observation was that peer connection fulfilled important workplace learning needs but was rarely identified or acknowledged by Australian GPs as the underlying construct enabling this.

In the academic literature, both Beckman and Wallace have also described that supportive peer relationships are often underestimated or overlooked.(5, 6) The literature also identifies that opportunities to reflect on clinical behaviour and clinical encounters with peers are sought by GPs.(1, 7-11)

The National Academies of Sciences published a model, shown in Figure 1.1, which identifies the individual mediating factors influencing clinician burnout and professional wellbeing, ultimately contributing to "learning and improvement".(3, 12). However, peer connection is notably absent from this model, in contrast to my own experiences of general practice and observations of those environments in which I have worked and taught over many years.

Figure 1.1. National Academies of Sciences system model of clinician burnout and wellbeing(3)

Figure 1.2 illustrates how I have conceptualised the National Academies of Sciences model to include peer connection and related concepts in my doctoral research.
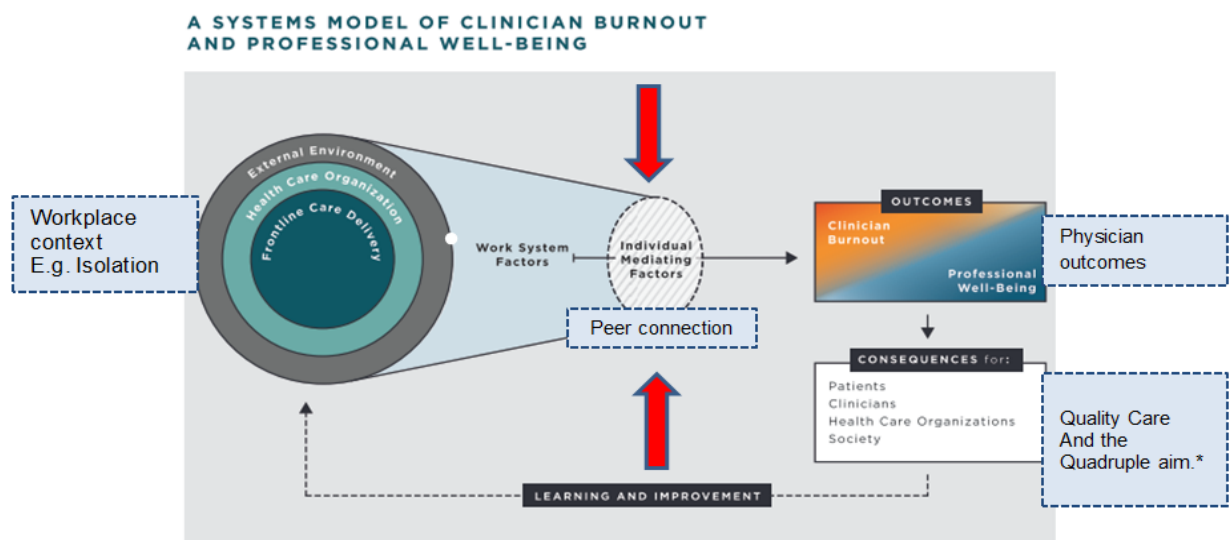
Figure 1.2. Modified National Academies of Sciences model

Previous evidence has found that burnout and physician wellbeing have consequences for patient care, physician health, healthcare organisations and the greater good of society.(3, 13-15) Notably, wellbeing and burnout are not opposites but discussed as an outcome of "healthcare work-place problems".(3, 16) It is possible to have poor wellbeing but not to have burnout; however, it is more

challenging to have wellbeing in the presence of burnout.(3) Burnout and wellbeing contribute to consequences for the entire health system, as illustrated in Figures 1.1 and 1.2. The process of individual mediating factors leading to outcomes and consequences can lead to learning and improvement, as seen in Figure 1.2. This suggests that peer connection may be a helpful concept to understand and individually mediate important outcomes like burnout and wellbeing in the workplace. The intersubjective space between GP peers may provide an important mediating factor for wellbeing that consists of both learning and support and is therefore therapeutic.

1.1.1 Problem statement

This qualitative research explores a relationship-based construct, peer connection, which can help mediate wellbeing, learning and work performance. Peer relationships between GPs are an underexplored area that has great potential to provide benefit for managing workplace problems. These workplace problems of general practice which might be mitigated by peer connection can include structural influences, contextual demands and outcomes, and can influence the consequences of work demands, as described in Box 1.

Box 1.1 Examples of workplace problems for general practice.

> **i) Structural influences:** the general practice workplace involves structural isolation.(1)
>
> **ii) Contextual demands:** knowledge requirements and demands for GPs at the point of healthcare delivery are substantial.(2)
>
> **iii) Outcomes and consequences of work demands:** sustaining individual GP wellbeing and avoiding burnout within the demands of the workplace can positively influence patient outcomes and workforce issues.(3)

1.2.0 STRUCTURAL INFLUENCES

1.2.1 Workplace context

General practice is a large and vital part of the primary healthcare system in Australia. Primary healthcare is characterised by:

1) first contact access

2) a patient-centred approach

3) comprehensiveness; and

4) coordinated care.(17)

Healthcare systems with a strong primary care sector are more equitable and cost-effective, and have better health outcomes.(17, 18) Research showed associations of improved population health, lower rates of hospitalisation and lower socioeconomic inequality.(19-22)

General practice is involved in many aspects of healthcare delivery and so sustaining this workforce is important. In Australia, during the calendar year 2022 there were over 38,881 GPs working.(23) Over 85% of the Australian population visit their GP at least every year, with 83% of the population seeing their GP on multiple occasions through the year.(18) Despite this, the RACGP[2] estimates showed that during 2017 the primary care sector received less than 9% of the overall health budget.(18, 24) The figure, however, is notoriously challenging to determine and other work suggests the amount is more likely to be around 6.8% of the total health budget.(25) In any case, the amount invested is low compared to the proportion of the population seen. In 2022, the RACGP Health of the Nation report focused on the ongoing challenges of sustainability of general practice in Australia.(26) Yet primary care is important to governments, patients and GPs. Therefore, any factor which sustains, promotes and facilitates GPs' positive experience of healthcare delivery is important.(27) Peer connection may be one of these factors.

1.2.2 Structural isolation of work

While there are several studies on GPs in group work, there is limited evidence on individual GP-to-GP relationships and the purposes they might serve. The literature on isolation often focuses on the mechanical networks or the geography of relationships, especially in rural general practice. For example, in countries characterised by geographical isolation such as Australia, Finland and Canada, isolation is mostly described in geographical and workforce distribution terms.(7, 8, 28,

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[2] There are two general practice colleges in Australia which administer quality care, education, training and standards for Australian GPs. The RACGP is the Royal Australian College of General Practitioners and has 35,000+ members. It is the largest GP college in Australia. There is also a separate but smaller rural GP college called the Australian College of Rural and Remote Medicine (ACRRM).

29) A qualitative study by Larkins et al., however, described isolation as an inherent characteristic of the general practice structure of work regardless of geography whereby general practice involves one doctor, one patient, in one room, at one time.(1) Structural isolation is an important motivator for GPs seeking peer groups which are ostensibly used for education, vocational or even therapeutic purposes. Joyce and Schattner's work found that GPs qualitatively described peer relationships as an informal means of overcoming isolation.(7, 8)

1.3.0 CONTEXTUAL DEMANDS OF WORK

1.3.1 Knowledge requirements

Medical education provided by formal contexts such as lectures, journal articles and webinars does not always provide the clinical knowledge required at the time of consultation.(12, 30-32) A 2014 synthesis of systematic reviews of continuing medical education (CME) affirmed that the most effective CME formats included the elements of being physician-led, interactive and repeated.(31) Research on clinical knowledge-seeking for GPs identified that informal education is a preferred addition to formal guidelines.(2, 33, 34) The informal and just-in-time method of seeking out knowledge is called mind-lines in this study and will be detailed later in the thesis.(2, 33)

The learning in general practice also includes the management of affective knowledge demands.(35, 36) This learning management may be sourced within informal supervision-like GP peer relationships. This thesis focuses on these informal settings for GP-to-GP relationships and the roles they play in relation to GP workplace knowledge demands.

1.3.2 A note on the informal learning setting

As discussed, the area of focus for this research is the informal workplace settings between individual GPs. In the UK, Launer theorised that GPs could use formal clinical supervision skills in informal workplace-based encounters.(37) Clinical supervision has a variety of definitions and is heterogeneously described, but according to Launer it involves clarifying human values, acquiring emotional literacy, recovering meaning in relationships, providing skill rehearsal and role models, evaluating and disseminating best practice in healthcare and, finally, protecting against disorientation, disillusionment and burnout.(37) Formal clinical supervision aims to improve quality

care by relationally solving problems of general practice.(37) The various types of formal supervision groups Launer discussed have shown multi-level quality care improvements, including in relation to patient engagement, physician burnout and psychological approaches to patient problems, and showed that:

> 'This kind of learning has a positive effect at many different levels.'(38)

Launer defined this informal supervision as "learning" rather than counselling or support. This suggests a theoretical learning approach to the dialogic and intersubjective nature of GP-to-GP relationship work that I might have conceptualised as peer connection.(37, 39) Furthermore, the "positive effect at many different levels" may mediate issues of isolation, informal learning and physician experiences including wellbeing.(2, 7, 16, 38, 40) One of the more important observations was that, in particular, GPs may not utilise supervision groups for psychological work alone and also that Balint memberships are declining.(37, 41) However, multi-level outcomes, including clinician burnout and professional wellbeing status, are potentially facilitated by community and "individual mediating factors", as illustrated in Figure 1.1.(3, 41) Therefore supervision outcomes, however they are achieved, have important quality implications for medical practice.(16, 27, 42-44)

1.3.4 Consequences of work demands: sustaining wellbeing and managing burnout

In a 2012 qualitative study of primary care physicians[3] in Rochester, New York, Beckman et al. reviewed the personal impact of a peer-to-peer interview adopted as an intervention directed towards primary care physicians' wellbeing.(5, 9) Beckman et al.'s research expanded on a quantitative study by Krasner et al. which had 52 hours of different mindfulness interventions directed towards primary care physicians' wellbeing and burnout management.(5, 9) One of the study interventions was a dedicated peer-to-peer experience.(9) Beckman et al. found 75% of the

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[3] Primarily I refer to primary care physicians as GPs, that is, medically qualified clinicians who work in a first-contact manner with patients but who are not emergency physicians. However, in the USA the structure is different in terms of location of practices and division of medical labour. For instance, internal medicine, paediatrics and obstetrics and gynaecology are all first-contact medical practices. I use GP for most cases unless a study specifically uses another reference, which might be family physician, physician or primary care provider. Some studies include all types of medical practitioners and do not provide specific outcomes for GPs working in primary care. Any differences or caveats to the interpretation of the scope of work of GPs is explicitly noted if this is important to the discussion.

physician participants reflected that sharing work-based experiences with their peers was one of the most meaningful components of the original 52-hour program of study.(5) Prior to undertaking the peer-to-peer interview, only 20% of the physicians had anticipated that peer connection would be helpful.(5) This research was similar to my own observations in education and work-based environments where GPs congregated and connected. That is, that a positive affiliated peer relationship was underappreciated as a workplace intervention.

Burnout and wellbeing literature also supports the investigation of community and social relationships as a potential mediating influence on work-based outcomes.(3, 16, 45) However, these are areas in need of further research. Maintaining wellbeing and avoiding burnout have been reported to be essential for quality care and have downstream effects upon patients and workforce systems.(3, 46) Whilst there is much research on burnout and wellbeing, there is less on the mediating effects of peer-connected community and less again upon the facilitation of individual GP-to-GP relationships that build that community.(3) My research focuses on this GP-to-GP relationship, cultivated primarily in informal areas of the GP workplace, which I have defined and called peer connection. This is the first study which qualitatively defines peer connection.

1.4.0 HOW I INVESTIGATE PEER CONNECTION USING ROGERIAN RELATIONSHIP THEORY

The humanistic psychotherapeutic basis of Balint[4] supervision processes explores the subjective relationship between GP peers.(48) Balint supervision was a progression of humanistic psychotherapeutic work of Carl Rogers, a key early figure in humanistic psychology.(4, 48, 49) Rogers' theory is that there is a common framework for maintaining ideal conditions for both therapy and education. This theory has been a salient feature of my reflexive observations of the informal conversations in the general practice workplace.(4) Rogers proposed a common

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[4] Balint supervision is a form of formal psychotherapeutic group debriefing developed by Michael Balint and pioneered at the Tavistock Clinic in London, UK. The Balint focus is on the doctor–patient relationship and the transference and countertransference in the process of healing, particularly for "heart-sink" (difficult) patients. Many small Balint groups have developed which operate under formal guidelines with a trained facilitator and under the auspices of the local Balint Society. The Balint Society operates internationally and is based upon Balint's work. This began with his findings published in the 1957 classic text *The doctor, his patient and the illness*. This work was particularly aimed at helping GPs formally debrief from complex presentations in clinical practice. 47.   Balint M. The doctor, his patient and the illness. 2000 ed. Edinburgh: Edinburgh : Churchill Livingstone; 1957. 395 p.

framework for therapeutic alliance[5] in both education and therapy which consists of empathy, unconditional positive regard and congruence.(4, 49)

The Rogerian theory supported my reflexive observations of important and informal conversations between GPs. The Rogerian theory proposes that an ideal therapeutic alliance has the same preconditions whether in education or therapy. I have adapted the Rogerian theory to apply to an informal setting involving GPs at work. My observational hunch was that there was a therapeutic alliance existing between GPs which I have called peer connection. Consistent with the Rogerian theory, this therapeutic alliance facilitates the outcomes of education and therapy for the GPs involved.

The adaptation of Rogerian theory in this doctoral study has been essential to explore the intersubjective space between GP peers.(4, 51, 52) In other words, a supervision-like therapeutic alliance is assumed but is unrecognised within education spaces although it is an important part of GP peer connection. The Rogerian theory will be detailed more particularly in the methodology chapter describing the approach to this relational research.

In summary, this thesis explores the individual GP peer-to-peer relationship as a connection within the context of Australian general practice. There are inherent motivators to seek out this relationship, such as the structural isolation of general practice. The concomitant knowledge demands of clinical and affective knowledge delivered just-in-time[6] have seen very limited research from an individual GP perspective. The ability to manage the immediate knowledge demands and avoid certain consequences of a demanding workplace, such as wellbeing and burnout, is explored in the context of the peer connection.(3, 16, 46, 53) The focus of the thesis is firstly on the individual mediating factors of peer connection within the workplace in an informal setting and

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[5] Therapeutic alliance is later be defined in the psychotherapeutic literature as having three parts: the real relationship, the working and learning alliance, and transference and countertransference aspects.(50. Duquette P. Reality Matters: Attachment, the Real Relationship, and Change in Psychotherapy. American Journal of Psychotherapy. 2010;64(2):127-51.

[6] Just-in-time here refers to the in-consultation knowledge demands or point-of-care needs in the workplace of GPs.

secondly on the use of peer connection GPs. Peer connection is explored to understand its role and its potential for broader applicability within clinical general practice.

1.5.0 INTRODUCTORY NOTE ON REFLEXIVITY

The research reported in this thesis has required seeking out multiple perspectives from GPs who had some experience with or without peer connection. The Rogerian framework addresses the psychodynamic context of therapeutic relationships which are considered with a pragmatic lens as they might be experienced in general practice. This allowed for a focus on 'what works' for busy GPs. These user or clinician perspectives on peer connection were explored within the participants' sites of work using observation and interview methods. As part of this work, the researcher reflected carefully and critically on her own values and experience and how this shaped the 'co-creation of understanding' of GP peer connection. That is, I am a GP, primarily a clinician, of 25+ years' experience of clinical practice, practice ownership and education environments. The research was conducted before I became President of the RACGP and as such I was not known to my participants except as a clinician and educator.

These experiences of my own were critical to collection of data in this setting and the analysis. They allow a rich and immersive exploration of the field given my own background and may have encouraged other clinicians to share their own experiences with me. Reflexivity is present throughout much of the thesis. At the same time, I am mindful of the immense diversity within the population of GPs and remained open to exploring and understanding different perspectives and experiences of peer connection as described by the study participants. At this stage needing to do a deep qualitative exploration, the research was confined to Australian General Practitioners.

1.6.0 AIM

To explore the role of peer connection in the working lives of Australian GPs.

Scope: An exploratory qualitative study of 29 Australian GPs.

1.6.1 Research questions

1. What are the roles of peer connection in the occupational experiences of Australian GPs?

2. How does the Rogerian theory explain occupational relationships in Australian general practice?

3. How does the context within the general practice work environment influence peer connection in the workplace?

1.6.2 Significance of the study

This research develops the concept of peer connection and proposes how it works and what roles it performs in clinical work in general practice. Peer connection is proposed to work through a clinical theory of mind, a hypothesis developed throughout this thesis. The clinical theory of mind combines elements of the Rogerian theory, psychotherapeutic relationship theory (therapeutic alliance) and learning theories. It is a development/expansion of the existing theory of mind, involving empathy, to be applied to GPs' clinical work with their GP peers.(54) The clinical theory of mind encompasses the sharing of cognitive load to create an informal supervision concept with a GP peer.

Peer connection is proposed to function through this informal supervision concept, restoring the ideal conditions for learning and therapy. Thus, peer connection can be flexibly applied to meet the (clinical and affective) knowledge demands of Australian GPs. Meeting their knowledge demands creates a resource for feelings of self-efficacy, an identity described as a "good GP" by participants. This resource also appears to mitigate some risk of burnout and may promote wellbeing as well as meeting knowledge demands.

Peer connection could be leveraged to support sustainability for Australian general practice. The policy implication of this thesis is that peer connection is an existing informal supervision model that warrants recognition for its important roles/functions. Peer connection also cannot be formalised or forced but there are factors which could be leveraged to support or hinder its existence.

The context of the GP work environment influences peer connection. This thesis identifies that there are both personal and workplace factors, within the context of the GP work environment, which are barriers or facilitators to peer connection (see Figures 1.1 and 1.2 earlier in this chapter). Personal factors that enable peer connection include being in reasonable personal condition or having wellbeing and having enough time (income/financial stability enables this). Workplace factors include a healthy work environment (i.e., leadership, role-modelling, empowerment within the administration of the clinic) and shared GP spaces (such as having a lunchroom, a local geographical location, virtual connection and internet access, being able to go to conferences and sharing meals).

Chapter One in review

- Peer connection was reflexively observed by me in real life as a working GP and this observation brought me to the research.

- In the existing literature, there is theoretical but not empirical development of peer connection.

- Peer connection in GPs has implications for burnout and wellbeing of clinicians.

- The significance of the thesis lies in the development of the clinical theory of mind hypothesis and peer connection for sustainability and retention of GPs.

- The context of the workplace matters with regards to the support of peer connection.

CHAPTER TWO: LITERATURE REVIEW

MAIN IDEAS

There are places where GPs informally congregate at work and some known outcomes of these. This chapter explores group formation in general practice – learning groups and therapy groups. Learning and therapy share a common theoretical underpinning and relational framework which may be usefully applied. This is especially relevant to previously undescribed asynchronous learning and therapy occurring in informal settings within GP relationships. These relationships appeared important to the researcher as there was a hunch and work based observation that the relationships themselves rather than any prescribed formal process may mediate GP work pressures. There was little found within existing literature on this topic.

2.1.0 INTRODUCTION

This chapter presents a narrative review of the circumstances and places where relationships between GPs might occur. The description of where GP-to-GP relationships might occur is important to understand the various formal and informal learning settings that are described. For most high-functioning GPs this is within the clinic or in learning groups as well as reflective and therapeutic groups. Learning and therapeutic groups provide the backdrop to this research in which peer connection occurs. Research literature on GP peer relationships covered technical processes or group outcomes and they were often described in terms of learning or therapeutic-wellbeing measures.(9, 55-59)

A background to GP wellbeing, resilience and burnout, and definitions is also provided. The chapter finishes with an introduction to Rogers' humanistic work. The Rogerian framework provides ideal conditions for simultaneous learning and therapeutic experiences, and reflexively matched my observations of working GPs. The framework elements are defined in relation to what is already known about learning and therapeutic groups and the roles they play in general practice.

The reviewed concepts follow very closely Figures 1.1 and 1.2. In Figure 1.1, the three levels of GP workplace are illustrated as frontline, organisational and external environment influences. The individual mediating factors in this thesis, as illustrated in Figure 1.2, focus on peer connection but

also empathy, which can influence relationships.(4, 5, 60, 61) The outcomes of burnout and wellbeing are reviewed including the buffering effects of community which are common to both concepts.(16, 62) The consequences of burnout and/or wellbeing status include patient outcomes, clinician outcomes and societal outcomes which are known already.(3) Following this is a description of the research gap and justification for the research. A full scoping review is provided in Appendix One.

2.2.0 DEFINITIONS, GP SPACES, PLACES AND OUTCOMES

We know opportunities to reflect on clinical behaviour and clinical encounters with peers are sought by GPs.(1, 7-11) Yet both Beckman and Wallace described in their empirical research with medical doctors that peer relationships and the appreciation of them are often underestimated or overlooked.(5, 6)

Personal or peer support and "community" are often described as mediating the demands of the medical workplace; however, there is little description of specific relationship dynamics and the role the relationships have in managing wellbeing.(3, 6, 16) To understand this, the background concepts of GP wellbeing and human connection need to be understood. This literature encompasses:

1) places of gathering such as learning groups, therapy groups and existing formal supervision models
2) psychodynamic processes of intersubjectivity and empathy in the understanding of human bonds(50, 63)
3) burnout and wellbeing literature which has relevance to outcomes(3, 4, 16, 39, 40, 46, 50, 59, 64-67)

This research is an exploration of the little studied intersubjectivity of GP-to-GP relationships and the role of particularly dyadic relationships in workplace functions. Notably, some important definitions are provided here to help provide context and background and which are presented in alphabetical order. I have also elected to define some further concepts later in the relevant sections to which they apply to assist with the flow of complex ideas.

2.2.1 Burnout

Burnout is a response to workplace-based stressors.(15, 68, 69) Burnout can be conceptualised as resulting from chronic workplace stress that has not been successfully managed.(3) For the purposes of this thesis and again to better manage a multidimensional construct, the theory behind the well-validated Maslach Burnout Inventory (MBI) is used.(70, 71)

Burnout consists of an emotional exhaustion dimension, a depersonalisation or cynical dimension and a lack of professional efficacy dimension.(71) The MBI scale representing these three contextual concepts has wide and established validity within the healthcare environment.(46, 72-74) There is a single-item self-defined burnout scale which has advantages in ease of use; however, this tends to underestimate burnout compared with the full MBI scale.(75) The contextual component of burnout being work related allows it to be subtly differentiated from other forms of clinician distress.(71, 76, 77) In a recent review burnout was conceptualised as an absence of wellbeing, although this is not fully reciprocal so the absence of burnout does not indicate the presence of wellbeing.(3)   We know that clinician burnout is a significant issue including in GPs and since the COVID-19 pandemic has been an ongoing problem for clinicians, which has implications for patient outcomes and the medical workforce.(3, 46, 78)

2.2.2 Empathy

Within the context of this study, the definition of this very broad concept aligns very well with the multidimensional view of the broad categories of the healthcare-validated Interpersonal Reactivity Index (IRI).(79, 80) The IRI has both a "perspective taking" (cognitive) dimension of empathy and a "warm empathic concern" (emotional or affective) dimension associated with prosocial behaviour. The prosocial component of the IRI encompasses motivational and behavioural reactions within warm empathic concern. There is also a "fantasy dimension" that allows for imaginative "mentalisation" visualisation and this dimension has a relationship to verbal literacy. Finally, there is an inverse non-empathy component, still emotional, called the "personal distress" scale. To add to the multidimensional construct, consideration is allowed for a dynamic temporal quality of fluctuation within this construct, which is an additional theoretical contribution from the work of Baron-Cohen.(81, 82)

This broad underlying theoretical definition includes the cognitive, the affective, the behavioural and the motivational dimensions of a dynamic process. This definition was originally medicalised by Greenson, supporting empirical development by Davis and most recently medically summarised again in a theoretical review by Jeffrey.(60, 65, 79, 80, 83) This definition generates consistency of empathy definition across 60 years of research, including theoretical qualitative and quantitative research.(65, 79, 83) Theory of mind dimensions have arisen from this definition and are located within the largely cognitive component of the empathy construct.(54, 84) It is noted within much of the literature that empathy is not always well defined and, when it is defined, the research outputs can be heterogeneous.(85)

The following four-part multidimensional definition of empathy is used throughout this thesis:

1)   cognitive perspective taking

2)   emotional warm empathic concern

3)   visualisation and imaginative components; and

4)   the emotional inverse personal distress dimension, which is not empathy but often due to its "emotionality" I have observed it incorrectly called empathy.(60, 65, 79, 80)

The notable issue in this definition involves emotional responses. Emotional responses require an essential distinction between self-referenced emotional responses that "overidentify" and other emotional responses that are experienced with an "as-if" component.(83) The as-if component fundamentally recognises through reflective cognition that emotion arises from another person and not from the self, even if it is felt as if it arises from self.(49, 65, 83) However, this distinction in emotional response is often overlooked and seems to be part of the continued disagreement over the construct and its challenging categorisation in philosophical, linguistic qualitative and quantitative forms.

Empathy research and the related theory of mind research have a great deal of consistency in concept but multiplicity in language and definitions. A multiple construct theory applied well to the complexity of the intersubjective relational focus of this research.

Maintaining empathy is important to empower patient outcomes and for the development of relationships.(4, 9, 86, 87)

2.2.3 General practitioner

A definition of GPs is "Physicians whose practice is not restricted to a specific field of medicine".(88) In some countries, primary care physician, family physician or family medicine practitioner are used. Notably this definition excludes physician assistants and nurse practitioners although these are often included in definitions and examples of "primary care occupations". The limitations of interpretability related to this context are noted within the studies cited.

2.2.4 Learning

Learning is defined in the Oxford Dictionary as:

> The acquisition of information or patterns of behaviour other than by genetic inheritance, or the modification of genetically acquired information or behaviour as a result of experience.(89)

In a thesis on professional learning, Yunga lists five different definitions of learning from a basic type, one of which is called informal learning to distinguish it from the other four categories: formal learning, workplace learning, non-formal learning and professional learning.(90) However, Sawchuk described a continuum between formal and informal learning rather than dichotomous categories.(91) For the purposes of this research, formal learning is defined as per Yunga as:

> Formal learning that occurs within an organized and structured context (formal education, in-company training) and is intentional from the learner's perspective.(90)

However, using Sawchuk's continuum allows for the complexity of how learning can occur from all experience and this is consistent with a constructivist philosophy including emotional-sociocultural activities.(91) Learning can also be serendipitous but proactive and "self-determined", which is a key insight from heutagogy as a development of adult learning principles.(92-95) Heutagogy is defined by Blaschke as:

> when learners are highly autonomous and self-determined and emphasis is placed on development of learner capacity and capability with the goal of producing learners who are

well-prepared for the complexities of today's workplace. When learners are competent, they demonstrate the acquisition of knowledge and skills; skills can be repeated, and knowledge retrieved. When learners are capable, skills and knowledge can be reproduced in unfamiliar situations.(95)

Furthermore, the sociocultural context includes the affect, which can be intellectualised and dismissed in medical school curriculum and in practice.(96) More recently there are moves to incorporate an emotional intelligence curriculum into medical school and leadership training to promote professionalism and team-based skills.(97)

Thus, in this thesis "learning" rejects the dichotomy between technical and emotional data, considering it all part of a learning experience, consistent again with constructivism, adult learning and original definitions of learning as knowledge beyond the genetic.(89, 91, 96, 98) The setting for all types of experience as informal learning is anything beyond the formal pedagogical practices of general practice, where "formal" has been defined and highlighted above. This allows a broad and continuous, rather than dichotomous, approach to the experience of "relationship" as a learning mechanism in both a technical and a relational frame. Informal learning thus defined within "work" supports a continuum between psycho-dynamism and cognition for individual learning principles.(91)

Informal learning has a vast body of literature in mostly nonclinical settings but is still developing within general practice settings. (2, 34, 99, 100) Synchronously occurring but also clinically related *emotional* learning, informal therapeutic processes have little to no development within general practice.(5)

2.2.5 Peer connection

Peer connection was observed reflexively in my working life to be a prosocial, positive therapeutic alliance sought purposively from collegiate interpersonal interactions, a GP-to-GP relationship. This is the phenomenon under exploration within this thesis.

2.2.6 Peer support and community GP peer networks

For the purposes of this thesis "peer support" refers to an often restorative relationship for a practitioner, especially those performing mental health work.(67) By contrast, "community of practice" refers often to a structured network of relationships in the workplace.(7, 101). Whilst "peer support and community of practice have established literature, the unique relationship between GPs as a *therapeutic alliance* is not well described within either of these contexts.(99, 102-106). Both community of practice and peer support are either purely descriptive structural terms or outcomes of a network (meaning and learning) or practice (passive emotional remediation).(67, 107, 108)

In a review of GP peer support needs in Australia, a definition that included "supervision elements" was described but the definition then drifted from relational description into a process form of functional and outcome description without addressing the actual connection.(67) The dyadic intersubjective nature of GP peer relationships appears muted with inattention and is not described well in either peer support or community of practice general practice literature. This might be reflective of the quantitative and qualitative difficulties of relational research described by Greenhalgh and Heath, who provided a structural framework for evaluating therapeutic relationships.(48, 109)

Based on my review of the definitions in the literature, peer support is not sufficiently specific or active enough as a descriptor for my pre-project observations. I have therefore used the term "peer connection" to focus on the GP peer relationship that appeared to me to be functioning in an active, purposeful working and learning alliance which addresses learning for GP work particularly in informal settings. In this research I use a psychotherapeutic frame suggested by Greenhalgh and Heath to explore the intersubjective space between GPs that is central to peer connection.(4)

A physician–physician relational alliance is not well described in the literature, whereas therapeutic alliance or relationship is well described in physician–patient contexts.(47, 48, 109-111) Any peer-to-peer relational description of therapeutic alliance occurs mostly in the psychiatry and allied health supervision literature and not in general practice literature.(39, 50, 101, 112-114) Most of that literature relates to a "hierarchical" form of supervision which is discussed later in this section.

Therefore, my use of the term "therapeutic alliance" between GPs as a connection is intentional and it has not to my knowledge been used this way before.

2.2.7 Psychological therapy

A useful definition is by Maslow:

> A search for values because ultimately the search for identity, is, in essence the search for one's own intrinsic authentic values. Especially is this clear when we remember that improved self-knowledge (and clarity of one's values) is also coincident with improved knowledge of others and of reality in general (and clarity of their values).(115) p166-7

This definition is important as it potentially allows therapeutic benefits from many perhaps underappreciated collegiate encounters within general practice.

2.2.8 Resilience

Adaptation to stressors and recovery have been significant parts of the definition of resilience, but more recently a definition has noted that resilience includes a potential improvement.(116) So the dynamic nature of resilience is more about moving forward than bouncing back, especially when applied to health systems.(116) Resilience notably can be applied to an individual, an organisation or a (health) system. This concept applied to organisations is still evolving within the literature.(117)

The definition in this study context, however, is closely aligned to a concept of recovery from or resistance to the concept of burnout.(118) Additionally, the possibility of individual increased strength as a consequence of adaptation is considered.(119, 120)

A structural multi-level view of individual, workplace and environmental types of system resilience is a useful addition to frame the influence of context upon the multidimensionality of resilience.(3, 116, 121) This is especially true of the noted increased disruptions due to the COVID pandemic.(78, 116, 122)

2.2.9 Supervision

Supervision is often defined as something synonymous with peer support; however, there are variable definitions depending on the context.(67) There have been some broad interpretations of supervision as:

whenever one person is assuming an enabling role for another.(112)

Or within the mental health nursing setting:

> a dynamic interpersonally focused experience which promotes the development of therapeutic proficiency.(112)

There are various models focusing on supervision enabling support and outcomes including Proctor's model of being, normative, formative and restorative supervision. These are useful domains of knowledge scope which includes broad categories for GPs in particular of benchmarking, clinical education and psychological-emotional knowledge management, as described next.

Normative: Standardisation of the performance of the clinician compared with peers

Formative: Professional development and education

Restorative: Emotional support for the role of GP as therapist (67)

These functions initially were used for counselling practice, but equally are critiqued for not providing enough guidance for supervisors on process or technique.(67, 112, 123)

In the psychoanalytic tradition, supervision is defined in terms of hierarchy and as:

> an educational method or intervention where a more knowledgeable, experienced, and senior member of the psychoanalytic profession enters into a relationship with a less knowledgeable, less experienced, junior member of the psychoanalytic profession.(39)

In Danish general practice, supervision has been defined as non-hierarchical:

> Peer group supervision is a collaborative, self-directed and self-monitoring, adult learning approach which involves a working alliance between two or more professionals for the provision of personal support in professional life.(66)

However, this Danish research reported the supervision was in groups, not dyads, and was formally arranged.(66, 124, 125) In Finland the research on general practice supervision also focuses on outcomes consistent with Proctor's model of supervision and the definition seems to border on therapeutic remedial and counselling processes, rather than an educative process,

which is a consistent criticism of the use of the term "supervision".(126, 127) In this study, supervision is not necessarily a counselling tool, but a learning tool.(66)

What is notable as a definition is that supervision firstly has *outcomes of learning* and that therapeutic functions are considered to be "incidental" to the process.(112) Supervision is differentiated from therapy by its educative functions and focus on professional development, and includes a patient response focus.(112, 127) Supervision as a *relationship*, however, will be more fully explored in the next chapter. For the purposes of this research on GP peer connection, the relationship is informal, has a broad learning scope and is non-hierarchical.

2.2.10 The general practice workplace

In my lived experience, the GP workplace can be defined as characterising the clinical setting, where patients are seen, but also the learning occurring in the corridors, patient-free consultation rooms and lunchrooms; broad education environments from corridor consultations to conferences; various support groups; and political and vocational meetings. In particular, the GP workplace has components of informality and it is in this informal context particularly that the relational research central to this thesis is focused.(7, 66, 95, 101, 102, 108, 128-130) There is a philosophical context that work is neatly defined as an activity of income earning; however, in critique there is an expanded concept:

> Paid work … always floats on a sea of "other work" that far too often remains invisible to the casual observer ... an awareness of all forms of (paid and unpaid) work allows us to see the interconnections, or overlapping and interpenetrating effects that multiple social spheres produce.(91)

This definition allows that the work of general practice can continue to occur in the unpaid spaces of after-hours meetings, lunchtimes, unpaid education time and a myriad of other times and places, that is, wherever GPs may interact together about the issues of "work".

2.2.11 Wellbeing

This is a definition that is academically under construction within the medical literature.(3, 16, 131) It is also one of the key outcomes of Figures 1.1 and 1.2.(3) Wellbeing is a concept that is

multidimensional and for this research relates to professional wellbeing within the workplace in particular. A recent report characterised wellbeing as:

> an integrative concept that characterises quality of life with respect to an individuals health and work related environmental, organisational and psychosocial factors. Wellbeing is the experience of positive perceptions and the presence of constructive conditions at work and beyond that enables workers [clinicians] to thrive and achieve their full potential.(3)

An operational definition arose from a systematic review of GP wellbeing including components of:

1) positive affect
2) personal relationships and social engagement
3) a life view that is meaningful and optimistic.(16)

For my research, the aspect of wellbeing that is particularly focused upon is the dimension of personal relationships and social engagement (in the workplace) whilst cognisant of the influence of environmental, organisational and psychosocial factors in achieving a positive outcome and full workplace potential of thriving. Wellbeing is important for the ethical humanitarian reasons encompassed by the definition, for the sustainability of the general practice workforce and for the patient outcomes implied by a systemic view of health ecosystems.(3) Since the global pandemic the impact of GP wellbeing upon workforce sustainability and patient outcomes has become especially salient to understanding possible mediating influences.(132, 133)

Thus end most of the definitions. Next these are integrated into the background of general practice culture and the whole of the context for this study. These next and related integrated concepts of culture workplace and GPs meeting each other are more described than defined.

2.2.12 The workplace and general practice culture

Australian general practice is a unique health workplace for longitudinal relational care and is the setting for this exploration of a proposed GP–GP peer relationship called GP peer connection occurring in practice.(17) A 2019 review established the importance of physicians' individual mediating factors, including social relationships, for wellbeing and burnout within the extensive

literature on healthcare systems contexts, organisational outcomes and above all patient outcomes.(3)

The workplace of general practice is a complex one with simultaneous clinical needs, education needs and personal support requirements for GPs.(3, 6, 12, 130) We know already that patient outcomes are dependent upon both education strategies and physician "wellbeing".(3, 31, 73, 86, 134) We also know that peer isolation is a structural component implicit within any GP workplace regardless of geographical location and that GPs are often described as seeking "peer support".(1, 7, 28, 56) We also know that physicians in general underestimate, stigmatise or avoid addressing their own personal needs including psychological support.(37, 126, 135-137)

Yet it is established that any high-functioning, sustainable health system requires physicians with good wellbeing to deliver better patient outcomes.(3, 16, 86) The physician's qualitative experience of delivering healthcare is enshrined within the quadruple aim of healthcare system reform, which also includes the patient's experience of receiving healthcare, population health outcomes and cost efficiency.(27, 138) The approach to peer connection is aligned contextually within the fourth aim: the physician's experience of delivering healthcare combined with their experience of knowledge delivery within evidence-based medicine (EBM) approaches.(27, 138-140)

2.3.0 PHYSICIANS AND THEIR PEERS

The idealistic aspiration to collegial filial-like relationships is a part of medical culture and important to acknowledge within the general practice workplace.(141-143) The Hippocratic Oath (5th century BC) included a phrase on family-like (male only) relational obligations between teachers and students describing relationships of "fathering, and brethren".(141) The World Medical Association in 1948 developed the Physician's Oath to provide a more secular interpretation of Hippocratic medical principles whilst inclusive of peer relationships; it was not yet inclusive of gender and states:

> I will maintain by all the means in my power, the honour and the noble traditions of the medical profession; my colleagues will be my brothers.(141, 142)

Further iterations of the oath were necessary to overcome, amongst many issues, the exclusion of women and the prohibition on medical abortion, as noted by Dorman in 1995.(141) In a reflective essay on teaching and mentoring in medicine, Bryan and Longo used an Oslerian perspective on the aspiration to community that exists within the medical profession and quoted Sir William Osler in his 1905 farewell speech to the US medical profession:

> Linked together by the strong bonds of community of interests, the profession of medicine forms a remarkable world-unit in the progressive evolution of which there is a fuller hope for humanity than in any other direction.(143)

Whilst these are philosophical and aspirational historical themes, the actual nature of this community of medical colleagues and of the relationships between members is little examined. Very often, it is rudeness and incivility as negative influences on teams and relationships that are explored.(44, 144) The nature of a positive collegiate peer relationship seems, therefore, to have remained aspirational, mute and undescribed.

2.3.1 Nominal notions of peer relationships

May and Revicki nominated "peer support" in 1985 as one factor for community physicians as a buffer against workplace stress.(145) The suggestion in theory of GP peer-to-peer relationships mediating against workplace stress recurred in 2016 in a systematic review focused on GP wellbeing.(16) Workplace "social relationships" versus incivility were examined in 2017 and found to influence physician wellbeing and burnout outcomes.(44) More recently, individual mediating physician factors were reviewed against outcomes within a major report regarding their importance for physician wellbeing.(3) Another report again affirmed the collected evidence for the beneficial outcomes of health systems when based on strong primary care, noting those systems are dependent upon physician wellbeing.(21)

However, there appears to be no in-depth relational exploration of GP peer relationships beyond peer support or remediation of peer isolation, or how these might relationally mediate workplace stress.(1, 3, 7, 8, 28, 146-149) Within the literature reviewed, peer connections focus only on the mechanical process or spatial networked relationships.

There is limited data from a study of Australian GP registrar[7] participants suggesting that informal peer support or that occurring in educational environments was preferred by GP registrars to formal peer support programs for vocationally related stress.(1, 8) What the GP registrars were describing remains unclear beyond the term "peer support" but this desired intervention was for the purposes of a wellbeing outcome or a stress-management process.(1, 8) In Australia, Joyce was able to provide some structure to the concept of practitioner support needs versus isolation using a qualitative method for rural practitioners.(7) In that study general practice was characterised on a geographical and descriptive basis needing support from isolation such as:

1) professional support for clinical information and referral
2) workforce support for locum and practice relief
3) social and personal support.(7)

However, there was again little explanation of what "social and personal" support actually meant and yet most of these three described needs were mediated by GP peer relationships in various ways.(7)

2.4.0 WHY SHOULD WE WORRY ABOUT GP WELLBEING?

GP and physician wellbeing and burnout outcomes are important to mediate for the purposes of patient care, the health system and the individual practitioner.(3, 16, 27) The psychological demands of general practice can be significant, as documented by the RACGP 2017 in the Health of the Nation report and as demonstrated by the National Beyond Blue report into the mental health of Australian doctors.(18, 46) It was noted, for instance, in the self-report RACGP survey (n=1309) that "mental health consultations" are the most common type of consultation self-reported by Australian GPs.(18) By contrast, using Beach survey data, a GP-recorded audit of consultations of (n=1941) GPs, hypertension was the most common presenting general practice problem with depression ranked fourth and anxiety 15th.(30) It is possible the difference between the RACGP

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[7] A registrar is a qualified medical practitioner undergoing speciality training for general practice. As of 2020 this changed to "GP in training" within RACGP models of speciality training. Registrars see patients independently in the community but have formal supervision of cases and sit exams to become fellows of the RACGP or ACRRM.

survey and the Beach data may reflect the perceived and self-reported impact of patients' mental healthcare demands upon GP wellbeing.(16, 150, 151)

Burnout and distress are widespread phenomena amongst physicians, particularly GPs.(3, 73) For instance, a 2013 Beyond Blue cross-sectional study showed psychological distress of Australian doctors to be high compared to other similar tertiary-qualified professionals.(46) Burnout amongst Australian GPs as measured by the MBI was 32.1% for the subscale emotional exhaustion and 33.1% for cynicism-depersonalisation dimensions.(46) Shanafelt showed burnout rates to be on average 45.8% of (all) physicians who were exhibiting at least one MBI scale symptom in a nationwide cross-sectional survey of US physicians (n=7288).(73) The constant psychological responses of GPs in practice were well documented in UK studies by Orton and Dale.(74, 152) In the UK in 2012, Orton found 46% of GPs reported emotional exhaustion and 42% of GPs cynicism-depersonalisation.(74) In Europe, GPs were particularly susceptible to burnout in a survey, with up to two-thirds of GPs exhibiting these features.(72) Since the COVID-19 pandemic the problem of burnout has escalated.(132, 133)

Australian figures are therefore consistent with international reports showing high rates of burnout, particularly in frontline clinicians.(73) The heavy load of frontline care is documented and important in patient care and workplace safety in both local and international literature.(3, 153) There are other consistent markers of GP distress such as early retirement, leaving practice and wellness, empathy and satisfaction measures.(9, 154)

The presence of burnout was suggested to indicate a loss of professional wellbeing by a National Academies literature review and this has implications across the healthcare system ranging from patient care to physician retention, health system performance and society in general.(3) This large review also suggested that individual mediating factors aimed at prevention of burnout and promotion of physician wellbeing warranted further research.(3) A systematic review of wellbeing interventions for GPs, however, found heterogeneous, low-quality and variable methodological studies.(16) The review of GP outcomes also found that positively focused preventive interventions and interventions aimed at "flourishing" as well as organisational interventions were very few compared to remediating interventions.(16) Whilst much of the literature suggests there is an

essential nature of relatedness between physicians, there does not appear to be any empirical work on relatedness and connections between them and this is true for GPs in particular.(155, 156)

2.5.0 THE PLACES WHERE GPS MEET

It is important to contextualise the known literature on generalities of networks, and group and therapeutic work. Within the workplace of general practice there are ongoing educational needs in addition to the clinical work of face-to-face consultation with patients.(12, 30, 33) There are multitudes of ways in which this medical education can be obtained both formally and informally, individually and in groups large or small, and increasingly in the virtual environment.(31, 37, 157, 158) Wenger and Lave first used the term "community of practice" to describe an informal working and learning community bound by:

a shared understanding of work through mutual engagement.(106, 108, 159)

Community of practice is an established concept that might well describe a less formal educational experience such as within general practice; however, there is little research on this in Australian medical communities.(34, 101, 102, 159-161)

The process of a community of practice as tacit, on-the-job learning, sharing of knowledge, skills and identity, and social construction of meaning evolved through the business and educational communities.(147) Within these loosely bonded social communities at work, it is known that both cognitive and therapeutic social learning is taking place.(108, 147) Indeed, Launer describes this type of informal learning environment and culture in his article on supervision for general practice.(37, 101) Community of practice research largely refers to networks and technical process, but does not involve much exploration of paired individuals.(102, 106, 159, 161)

So far much of the exploration of peer connection has been on GP registrars and medical students, particularly in terms of learning outcomes and networks.(1, 7, 10, 28, 162). Early emergent work, therefore, suggests a need for exploratory development of peer connection and its relationship to the workplace and GP life.(5, 7, 9, 10, 102)

Some very specific examples of what is known about general practice therapeutic and learning groups, with some outcomes, are reviewed next. These are reviewed as already established areas

where GPs congregate but notably in groups where the technique or outcome is considered to be the object of research and the relationship between individuals seems to remain little more than an idea.(5, 9, 37)

2.5.1 Formal learning groups

Launer theorised that educative environments provide "Balint-like" work, yet this is described only in the early career years and only for general practice registrars or trainees.(37, 163) Opportunistically the informal learning environments of general practice provide some ability for established GPs to develop therapeutic unstructured connections with their peers.(37, 101) However, there is little further empirical development within the literature regarding GP-to-GP relationships and little on the informal learning communities of general practice, including in the virtual world.(102) The work is predominantly on formal and structured programs, with therapeutics and learning groups conceptualised as being separate, mutually exclusive types of groups.

There is some research suggesting formalised CME groups without any supervision-like function also mediate wellbeing and burnout outcomes in GPs.(59, 164, 165) There are suggestions of reductions in uncertainty and isolation as important motivators or outcomes, but little attention is given to the relationships that enable these functions.(7, 164, 166) Although Murray described social support and personal relationships as having a role in wellbeing outcomes, the learning group literature largely focuses on learning needs, knowledge outcomes or wellbeing outcomes, while commentary on the psychodynamics of the relationships as an intervention is muted.(9, 16, 40, 167, 168) Learning group research seems clearly separated from peer support and supervision group research. Once again, technical processes of the group are prioritised over relational aspects. Divisions between specific formal activities as technical tasks persist.

2.5.2 Informal learning groups

Informal learning connections exist in general practice, as first described in the UK by Gabbay and Le May as "mind-lines", which are somewhat similar to community of practice literature.(2, 33, 34, 40) Mind-lines are defined as:

collectively reinforced, internalised tacit guidelines, which were informed by brief reading, but mainly by their interactions with each other and with opinion leaders, patients, and pharmaceutical representatives and by other sources of largely tacit knowledge that built on their early training and their own and their colleagues experience.(2, 40)

Most of the general practice mind-lines literature is sparse and acknowledges the challenges of constructivist knowledge which philosophically clashes with the rational discipline of EBM.(40) A systematic review discussed some physician relationships but all in terms of network analysis or in mechanical, structural and spatial terms.(40, 168, 169) The intersubjectivity between GP peers is therefore underexplored in both learning and therapeutic groups (discussed next) or else seen as inconsequential compared to the technique or the stated aims of a group either formally or informally connected.(155) The important issue remains the informal or ad hoc nature of these interactions, what the outcomes are and what "relationship" has to do with their existence.

2.5.3 Therapeutic and supervision groups

There are a whole range of different technical and support approaches other than education groups where GPs might meet and form an informal peer connection.(64, 66, 67, 111, 126, 170) The following lists some of those groups and the research within them. Notably much of the research focuses on technical aspects, group functions or outcomes, while separate peer relationships are not delineated from these functions.

Next I explore some of the supervision (including Balint groups), therapy and education groups in general practice and briefly describe known contexts, processes and outcomes.

Formal supervision groups: Balint: At the Tavistock Clinic in 1950s London, Balint groups first appeared in medicine pioneered by Hungarian-born psychiatrist Michael Balint.(47) Therefore there is commentary around the benefits of Balint-style peer groups for GPs.(111, 171) Balint groups are structured psychotherapeutic group interactions between medical practitioners analysing difficult patient consultations.(111, 172, 173) However, Balint groups are conceptualised to be of benefit to the individual practitioner and to the therapeutic alliance between practitioner and patient, not to the therapeutic alliance between peers.(47, 103) In other words, Balint work utilises the platform of group relationships and the aim is improved patient–physician relationships,

while the individual physician–physician relationship is unarticulated.(37, 47, 103) Balint work is also formalised and structured peer-to-group work with a trained leader.(103, 111) Furthermore, the introduction chapter has already described difficulties with establishing and maintaining Balint groups both internationally and locally within Australia. These difficulties, therefore, limit further development of this process as a potential modifier of wellbeing and related outcomes.(174)

To contrast with positive outcomes, mandatory participation in Balint or Balint-like supervision groups had negative outcomes for some practitioners and this is compared with Finnish research where 29% of participants said they had no need of clinical supervision.(64, 126) Despite the limitations, however, there were known wellbeing benefits for some GPs in attending supervision groups, with the caveat that participation was ideally of 12 to 18 months duration.(64) A 2015 review of Balint and modified Balint supervision groups confirmed, however, the heterogeneous nature of the Balint research in terms of focus on structure, function or outcome and generally weak methodology.(64)

Other peer support groups: In Australia Jackson-Bowers produced a review of peer support needs of GPs managing patients' mental health needs and suggested there was very little formal peer support established.(67) Jackson-Bowers also suggested there were enduring stigma- and shame-based barriers to implementation within existing medical culture, which is reiterated in other work on GPs addressing their personal needs.(67, 126, 136, 137, 174) By contrast, formal peer group supervision work is described around the world as a means of mediating wellbeing and burnout in GPs and other healthcare workers.(6, 14, 41, 64, 67, 103, 173, 175)

Other proposals for supervision-like GP peer support groups exist. In the UK, narrative programs as an alternative to Balint were described as a way of overcoming some of the limitations of supervision work.(37) In Denmark, GP-focused supervision groups exist but with a variety of techniques; these are an established part of practice and are uniquely supported by government policy.(66) Research from Finland suggested that some GPs (called family physicians) experienced an unmet need for clinical supervision, although the definition was of "peer support" and drifted into a therapeutic process, making comparison difficult.(126)   For all studies, however,

a variety of supervision techniques from Balint to Balint-like existed; the process was structured, formal and occurred in groups; the wellbeing outcomes were heterogeneous; and there was stigma and not all GPs wanted to participate.(66, 67, 125, 126)

2.5.4 Informal or serendipitous places for GPs meeting each other

Being a part of a professional community has been a traditional part of medical practice.(143, 176) Professional community has been particularly at risk with increasingly narrowly defined specialities and fragmentation into separate "boundaried" workspaces.(155) We know informal places of eating and informal friendship chatter are of benefit for wellbeing goals, which is established research outside of the medical literature.(177, 178) Much of the informal chatter that would go on in informal places such as an interdisciplinary doctors' dining room has disappeared, particularly with electronic communications becoming a large part of professional communication.(155) Even within practices of similarly qualified clinicians, lunch can often be eaten over the computer or managing the paperwork, while informal workspaces and chatter can be framed by systems of healthcare as "non-productive" time.(155, 179) A peer group program for resident doctors in Canada was a response to losing the connected spaces of "community" identified as a key area of vulnerability to burnout and wellbeing.(175) It seems that there is a need to redefine a concept of "work" as identified in Sawchuk's theoretical paper on the definition of work in modern times and the relationships to both power structures and informal learning.(91) It may be of benefit, therefore, for many reasons, to have a more integrated approach to examining informal work practices within general practice.

2.6.0 IS THERE A COMMON FRAMEWORK FOR LEARNING AND THERAPEUTIC DYNAMICS IN GENERAL PRACTICE?

I have defined and described what is known and exists within the literature on clinical learning and therapeutic groups. Now I am going to look at what *might be* in terms of these two parts of the knowledge work of general practice coming together. Previous work has noted that this simultaneous process may be underappreciated by clinicians. (5, 9) I next introduce and *define* the components of a framework and later in the methodology chapter I will describe *how and why* this framework has been applied to a consilience of learning.(4)

As already suggested, informal opportunities and clinical learning groups may be where GPs are deriving informal supervision for learning, meaning, purpose and support.(7, 37, 96) The UK psychiatrist King articulated that much of this practitioner "affiliation" arises from social bonds theory, attachment styles and empathy.(180) As such, the focus on informal relational learning is straddling aspects of relationship theory, theory of mind, empathy and affect, as also predominant in the work of the psychotherapist Rogers.(4, 49, 54, 98) The nature of learning within both education and therapeutic settings was described by Rogers as needing a common framework for relationship alliance using empathy, congruence and unconditional positive regard.(4) This framing is supportive of peer connection exploration using a Rogerian approach whereby therapeutic and learning environments coexist within a common relational framework.(4) This intersubjective frame from Rogerian theory is discussed in the following section.

Re learning and therapy together ("the unmeasurable"), Greenhalgh and Heath stated that:

> We live and work in a world of metrics. The unmeasurable makes us uneasy.(109)

Reporting on medical therapeutic physician–patient relationship approaches, Greenhalgh and Heath described quantitative techniques and qualitative techniques for relationship analysis in medical practice.(48, 109) All of these techniques address the patient and physician relationship or goal-directed outcomes. This reinforces that the main focus of medical relationship research in learning and therapy groups of GPs, as already noted, is the therapeutic alliance between practitioner and patient or the outcome on wellbeing or learning measures.(3, 16, 33, 40, 64, 66, 67) Most of the research is invested in technique and not relationship, which is a false dichotomy according to psychotherapy theory.(181) The psychodynamic psychotherapeutic approach based on the humanists is used for this research but, by using Gelso's integration of approaches, this does not ignore the outcomes or the techniques.(48, 181, 182)

The qualitative research techniques for relationships included psychodynamic analysis, especially the Balint method.(48) As discussed, the Balint approach is a familiar technique for medical practitioners, especially GPs, and its process includes reflexive non-judgemental discussion.(37, 47, 48, 103) Balint is built upon the work of Rogers, who suggested the components of empathy,

unconditional positive regard and congruence formed a common framework for facilitative relationships in both therapeutic and learning environments.(4, 183) His body of work suggests the Rogerian framework facilitates the therapeutic alliance, which is therapeutic more so than any setting or technique in which it is located.(48, 183, 184) This approach, established by empirical studies, stands theoretically apart from the rational behaviourists, who favour technique and process over relationships or therapeutic alliance.(183)

2.7.0 ROGERIAN THERAPEUTIC FRAMEWORK DEFINITIONS

The Rogerian framework consists of empathy, congruence and unconditional positive regard. As described by Lawson, this can be used to integrate the earlier discussions on GP-to-GP work-based interactions.(4)

2.7.1 Empathy

Empathy has already been defined earlier in this chapter as an important multidimensional construct for relationships and intersubjectivity. Empathy is an important part of the Rogerian framework. Rogers used an as-if component of empathic appreciation of emotional states in others, aligned with work by Greenson and Jeffrey on the psychodynamic construct of empathy.(49, 65, 83) The empathic appreciation of emotional states, but without moving into personal distress which is a self-referenced state, is an important part of the multidimensionality of empathy.(65, 79, 80, 83)

2.7.2 Congruence

This is a term that was first derived from Rogers' work and reflects a condition of being "accurately oneself".(4, 49) Other attributes of this state include genuineness and the ability to not overpower the other but to be honest, authentic and "real" particularly as regards emotion.(4, 49, 185, 186)

A physician's personal "congruence" also has some resonance, with surface acting (role playing) and deep acting described in physician emotional labour practices.(187) Acting methods as a coping mechanism for emotional work were explored in the context of clinical empathy in the physician–patient relationship by Larson.(187) The acting methods were defined as follows:

Individuals can either fake their emotional display by forging facial expressions, voice, or posture or they can try to alter their internal experience and act on emotions they actually experience.(187)

Larson's research suggested that surface acting contributes much more to emotional exhaustion and burnout than deep acting, which is a genuine internal–external congruence with authentic positions of helping.(187)

In further development, therapeutic alliance continues to evolve and the term "congruence" can be differentiated as a part of a relational (humanistic) versus technical (interventional) driven agent of change.(181) There appears to be a necessary relational or intersubjective congruence. Gelso suggested that these two dichotomous approaches, the technical versus the relational, need to be integrated better in future research so that both technical process and relationship attributions are considered together as potential agents of change in psychotherapeutic relationships.(181) The term "congruence" has evolved to include congruence not only of a "healer" or "teacher" but also of the "client or other" in psychotherapeutic terms, which is a more recent development in relationship theory.(185) Finally, Kolden in a 2019 update synthesised the debate over the definition of congruence as a mix of the intrapersonal characteristics of both a therapist and a client as well as an experiential experience within an interpersonal dynamic.(185) Most of the debate over therapeutic alliance elements is notably situated within the therapist–client relationship. For the purposes of this research, the constructs are adapted to the peer-connected relationship between GP peers.

2.7.3 Unconditional positive regard

Unconditional positive regard is a state of "prizing" another and is helpful for reducing psychological defences.(4, 49) This does not mean that behaviour is accepted unconditionally, however, but implies a separation of personhood from behaviour.(4) There is always a difference made between acceptance of a person and approval of a person.(188) From the medical incivility literature by both Riskin and Maslach, rudeness and judgement may well be interrupting a relational process to the detriment of team performance, peer relationships and patient outcomes.(44, 144) Unconditional positive regard by others assists individuals

psychotherapeutically to move into a state of unconditional positive self-regard as a further psychotherapeutic development of the actualising[8] concept.(190)

There are another three components that support the Rogerian framework: 1) there must be psychological contact between the two people; 2) one of them must be distressed (in a state of incongruence); and 3) there must be some communication of empathy (the prosocial warm empathic concern dimension) and unconditional positive regard (non-judgemental).(189)

In a review by Joseph and Murray, psychotherapeutic development of Rogerian theory was explored to demonstrate modern interpretations of the framework which integrate Rogers' original non-directive approaches with psychoanalytic and technical approaches.(189) However, the original Rogerian meta-theory of an actualising (wellbeing) tendency arising out of an "ideal" relationship framework continues to drive outcomes based purely on the concept of a therapeutic relationship, even apart from the modern adaptations of psychoanalytic and technical approaches.(189) Rogerian theory was transformational in reducing hierarchical treatment processes in therapy by including a discussion of transference and countertransference as an exchange of reactions and feeling within the therapeutic dyad.(189) The reduction in hierarchical processes and flexibility for learning and/or therapy as outcomes are important concepts from the Rogerian framework used within this project of exploring peer connection. Removing power differentials is important.

There are questions in the literature relating to this psychodynamic relational theory over the last half of the 20th century, when there was a preoccupation with proving superiority of process and grounding in medical models of deficit, rather than theoretically and philosophically developing the original Rogerian meta-theory.(181, 189) However, more recently Rogerian theory is increasingly

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[8] Actualising is a "meta-theoretical assumption that people are intrinsically motivated towards optimal positive psychological functioning". However, Rogers also recognised that this is an "ideal". The "actualising tendency" became something called "fully functioning", which in more modern literature captures the essence of "wellbeing". This allows for an appreciation of the person-centred approach whilst recognising environmental and sociocultural influence.(189.
     Joseph S, Murphy D. Person-Centered Approach, Positive Psychology, and Relational Helping:Building Bridges. Journal of Humanistic Psychology. 2013;53(1):26-51.

integrated as per Gelso into more modern techniques of therapy, as the search for superiority of technique over relational alliances has not demonstrated a hierarchy of effects.(181, 188, 189)

As more recent medical humanists discuss, the advances in biotechnical aspects of medical practice continue to be prioritised compared to humanist approaches.(191) Yet relational aspects of medical care seem relevant to patient outcomes, student satisfaction with compassionate teaching and physician wellbeing outcomes.(191) The relationships between peers that are positive have little but passing acknowledgement. More often, however, the negative effects of poor-quality peer relationships are reported upon.(44, 144, 192) Therefore modern psychotherapeutic approaches encourage an integration of relationship alliances, techniques and outcomes, which is reflective of the model for integrated understandings developed by the National Academies for a systems approach to physician wellbeing.(3, 181)

For the purposes of this research, the Rogerian framework and its definition here establish a basis for examining the cultural and psychological conditions of peer-connected relationships. The tripartite nature (empathy, congruence and unconditional positive regard) of Rogerian theory with application in both learning and therapeutic groups provides some structure across a broad range of GP-focused informal activities to explore an active learning peer relationship called GP peer connection. The therapeutic relationship thus has a framework adapted to explore the construct in a peer-connected GP context regardless of the purpose or outcome of the gathering place.

2.8.0 A GAP IN THE RESEARCH ON GP-TO-GP PEER RELATIONSHIPS

Prior to my data collection I conducted a systematic scoping review from 2014 to 2015 for relevant literature on positive GP-to-GP relationships. The search terms and strategy were developed with an academic librarian and full results are described in Appendix One. Only English texts were retrieved. Information was restricted to post vocational-training general practice contexts only. The detailed structured review is based upon the Arksey and O'Malley approach to scoping studies. (193)   I will provide a summary here of the scoping review however the full details and procedures are detailed in Appendix one.   The search terms were reviewed throughout the thesis

development and a short summary of subsequent papers concludes the confirmation of a gap in the literature.

Rationale

The rationale of 'finding the gap' is to begin work to add to the current knowledge base of any discipline utilising a justified research proposal. The search was carried out between October 2014 and June 2015.

Objectives

The objective was to explore the research questions of the role of peer connection in the occupational experiences of Australian GPs and how contexts within the GP workplace and Rogerian theory influence any of this process.

The framework for the literature search proceeded along a PICO construct. Given that the work was methodologically variable and heterogeneous, both interpretations of PICO were considered. Therefore the population (P) examined is GPs. The intervention (I) (quantitative) or phenomenon of interest (qualitative) is peer connection. The control (C) is dependent upon the study design and the context is active primary care general practice. The outcomes (O) are empathy, resilience or burnout. As peer connection is poorly characterised in the literature, peer isolation is used to characterise, by inverse inference, some of the complexities of the phenomenon of interest. A need to use a slightly broader or liberal scoping lens to identify the gap is noted.

Eligibility

The relevance of included studies retrieved from the academic databases was considered broadly for relevance to the research themes. Search terms were developed in conjunction with an academic librarian at Monash University. The retrieved papers were narrowed down for relevance using the PICO criteria. Additional papers were retrieved from the author's own bibliography, the grey literature and bibliographic indexes of key papers. As this is an exploratory review, a broad

view was taken of methodological processes. The inclusion and exclusion criteria are detailed and summarised in Table A1.1. The search strategy is detailed diagrammatically in Figure A1.1.

<u>Papers found addressing the research question</u>

To understand any work that may have already been performed on the research question six studies are now reviewed. These papers are tabulated for a comparison in Table A1.4. Using a very narrow scoping lens would have generated one paper derived from a subsequent study being first a quantitative study (Krasner and Epstein) followed by a qualitative study (Beckman).(5, 9) The discussion is broadened slightly to include the other four papers as these provide useful insights in what appears to be an obvious gap within the current medical literature at this time.

The discussion is broadened slightly to include the other four papers as these provide useful insights in what appears to be an obvious gap within the current medical literature at this time. The papers are a mix of three qualitative studies: Beckman; Jensen; and one case study, Nielsen.(5, 56, 125) The other three papers are quantitative: Krasner; one pilot study; and Fortney and Winefield, being a quantitative study but with some open questions.(9, 57, 58) Due to the heterogeneity of study design, the context and the exploratory nature of this work, a narrative synthesis is used. There is an attempt to make sense of the need for further work based on the early work presented within the final six papers. Idea webbing and concept mapping are considered to be reasonable approaches by Popay in synthesising data from heterogenic studies including qualitative papers and accordingly for this thesis, this method was used to represent the research gaps.(194)

<u>Discussion on included papers: **PICO**</u>

Participants: setting of general practice versus primary care

The setting of general practice is considered important in a sociocultural view given the variation for exposure to other medical peers informally or formally. The studies by Krasner, Beckman and Fortney were USA based and these participants, although called "family physicians", may differ

considerably from the small private practice GP that characterises Australian general practice.(5, 9, 57) In European GP settings (Nielsen) and Canadian GP settings (Jensen), the study participant GPs had a more similar workplace context to Australia.(56, 125) Winefield was the only Australian study on GPs that met inclusion criteria.(58)

In the USA, family physicians may have hospital affiliations and see a restricted patient list based on whether they are obstetricians, gynaecologists, paediatricians or internal medicine practitioners. Hospital environments more typically have more opportunities for formal peer meetings. The Danish GPs had a funding model allowing GP-led peer groups and these were examined in a case study by Nielsen; however, there is no current funding model for GP-peer groups in Australia.

These organisational, structural and political barriers to peer connection were mentioned by Nielsen, Winefield and Beckman.(5, 58, 125) The participants needed to be in primary care and the paper needed to at least address each of the research question themes to some extent even if only one of the thesis themes was the main topic.

Intervention or phenomenon of interest

The studies including Beckman, Fortney, Jensen, Krasner, Nielsen and Winefield are of various designs, strengths and applicability.(5, 9, 56-58, 125) In all the studies there was no direct look at GP peer connection other than describing it as simply existing or utilising it as a moderator or method to deliver a particular intervention. Only Krasner and Beckman considered peer connection might be an intervention rather than the mindfulness program described.(5, 9)

Peer connection was structured formally for the purposes of physician therapy in Nielsen with the effects on GP burnout and wellbeing examined.(125) The discussion by Nielsen was directed at the process of therapy delivered by an experienced facilitator on the outcomes of wellbeing and avoidance of burnout. There was no characterisation of the process of peer-to-peer intervention or qualitatively any consideration of moderation of outcomes related to relationships between peers.

Fortney's study went further to characterise peer connection as being a component of the intervention of mindfulness and subsumed it conceptually within mindfulness.(57) Fortney's USA-based mindfulness study was a pilot and the participants were not transferable to the setting of Australian general practice.(57) In conjunction with the blurring of themes and failure to recognise the possibility of the relational therapeutic nature of peer-to-peer contact, this study by Fortney is considered to be a study of contrasts rather than concordance with the research question. Its validity of the construct, along with the internal and external limitations on validity, severely limit the usefulness of the Fortney study.(57) However, it was included to demonstrate the situation of the literature themes and it demonstrates how often the peer relationships are assumed.

However, Jensen from Canada was able to conceptualise peer-to-peer connection as a separate theme supporting the study phenomenon of resilience.(56) Jensen reported "supportive relations" as occurring in multiple domains such as: education, mentoring, professional networks and structured in work routines. Jensen, however, was focused on the facilitated and formal process of therapeutic groups rather than the relational peer connection or informal "supportive relations". For most studies reviewed so far, it seems common that a "process" or "outcome" rather than a "relation" is examined.

The study by Winefield was a small Australian pilot using quantified scales to examine a group process for the purposes of stress reduction in women GPs.(58) The internal validity was low; however, the process was exploratory for the purposes of intervention development.(58) Winefield implemented a before and after study design utilising at least the skills of a registered psychologist and included relaxation techniques in a GP peer group. The intervention therefore was formal and complex, and peer connection may have been involved in altering some of the outcome measures; however, as noted by the author this was unable to be clarified.(58)

Control and Outcomes; alternatives for qualitative studies

Notably control and outcomes of the PICO method are rarely suitable for use in qualitative studies.(194, 195) The studies here did not always use control groups and rarely comparison

groups. Outcomes were not the same definition as a quantitative outcome as identified by Cooke.(195) This is acknowledged and other terms such as setting, sample, research design and evaluation are used broadly within this assessment of studies of varied methodological orientation.

The quantitative study by Krasner, for instance, allowed that peer connection may have moderated outcomes on the impact of mindfulness rather than the mindfulness itself.(9) The Krasner study is important as it led to another follow-up qualitative study by Beckman to explore the role of peer relationships upon the outcomes. This recognition led to a qualitative interview of a subset of the same study participants by Beckman. In this follow-on study, 75% of participants identified in semi-structured interviews that "peer connection" was a powerful and positive experience.(5) In addition, this "positive connection" appeared to be enabled at multiple levels:

1) An *intra-personal* disposition of the participant practitioner towards reflexivity

2) An *inter-personal* disposition towards others

3) A *workplace level of organisation* including a safe emotional *culture* that enabled this to occur

This remains the most useful single study addressing the strength of peer relations as an independent phenomenon and notably encompasses two papers, Krasner's and Beckman's.(5, 9)

In summary, peer connection as an experience or intervention is not well characterised within the literature. There is scope for both concept development and framing of peer connection occurring between GPs. Interventions are rarely designed to examine peer connection separately as a moderator of burnout and promoter of resilience.

However, without conceptual understanding of concepts involved, interventions will most likely remain complex and poorly clarified. Mostly peer connection is considered within the realm of formalised therapy sessions which are hierarchical and utilise a skilled facilitator on a self-selected group.(56, 125) Informal and non-facilitated peer-to-peer interactions are not well examined. There is no descriptive or theoretical development of a positive therapeutic relationship between GP and GP in informal or education settings. Peer connection is more often framed, if at all, as a remedial

facilitation where the tool is "therapy" to recover from burnout rather than as a therapeutic alliance to preserve, to facilitate or to develop resilience.

There is a significant body of work looking at burnout and therapeutic groups.(56, 58, 125) But it is not known which GPs if any use a process of peer connection, although both Krasner and Beckman clearly raised this as a possibility worth exploring. The gaps consisted, therefore, of understanding the opportunities for peer connection occurring in informal settings. It is notable that education activities account for a significant amount of dedicated professional time.(12) Informal settings might include but are not limited to educational activities.(37) Thus the roles and context of the GP peer relationship to my knowledge have had no exploration.

<u>Two papers and one study warranting close examination.</u>

In the "Association of an educational program in mindful communication with burnout empathy and attitudes among primary care physicians" by Krasner, the stories and experiences of clinical practice were shared in pairs or small groups of trusted peers. (9) Narrative medicine written techniques were utilised along with the appreciative inquiry relational techniques (Figure A1.2) to focus on and understand the physician clinical experience.

The purpose of appreciative inquiry "proposes that analysis and reinforcement of positive experiences are more likely to change behaviour in desired directions than an exploration of negative experiences of deficiencies".(9, 196) Thus utilisation of the phenomenon of trusted peer relationship and an interpersonal relational sharing or therapeutic alliance, rather than the formal intrapersonal mindfulness meditation, was explored further in a qualitative study by Beckman as a follow-up of a quantitative study.(5, 9) The quantitative study by Krasner was a before and after study so some limitations can be seen in the self-selected non-randomised physician sample.(9) Within the Krasner study, empathy was defined by the Jefferson Scale of Physician Empathy which, as previously shown, relies heavily on the cognitive arm of empathy.(9, 197) The prosocial affective and affiliative parts of empathy are not measured well by the JSPE scale and may well be underappreciated within this research.(79, 80, 197)

<u>A singular paper illustrating some singularly interesting but unexplored ideas</u>.

Beckman, later queried whether the actual relationships and positive dialogues between primary care doctors were achieving outcomes of wellbeing that were otherwise attributed to other interventions.(5, 9) Within the qualitative arm of the Beckman study, 75% of the physicians interviewed found sharing their experiences in a positive relational way was one of the most meaningful parts of the original program.(5) Low pre-intervention awareness of expected benefit is illustrative of the low level of self-awareness and perhaps reluctance of GPs to address their own human needs.(135, 136) Findings within that study included a reflection upon this relationship, as indicated by the physician participants, that they did not anticipate how powerful a reduction in isolation would be.(5) Nor did the same participants anticipate that sharing physician experiences with peers would be impactful and would generate immediate and significant positive personal understandings.(5) Central to this were the concept of emotional safety and a non-judgemental atmosphere which facilitated the relationship between peers.(5) Two other themes emerged from the paper and included the contributions of mindfulness skills for communication and developing greater reflective self-awareness for self-care.(5)

<u>Pre data collection gaps and setting up for this research</u>

Peer connection, therefore, remains unexplored within the literature. The purpose of this thesis is to advance this limited understanding and provide an exploration within burnout, resilience and empathy frames. The previous research concentrated on the interventions and cognitive approaches towards the alleviation of burnout and development of resilience rather than considering relational affective and affiliative approaches. This thesis aims to explore a socially constructed and mediated concept of peer connection as a distinct relational social construction utilised to develop, enhance and maintain resilient and empathic GPs. The gap has been clearly identified and the rationale for the benefits and outcomes established.

<u>A follow up on the gap post data collection review</u>

The GP peer to peer relationship, has been acknowledged, but remains underexplored in more recent papers also.(34, 44, 66) The theory that an informal positive affiliated relationship might buffer losses of wellbeing has been noted in subsequent literature, but there has been no follow-up on the psychodynamic nature of that relationship.(16, 34, 66) Launer theorised earlier in 2007 that an informal supervision relationship might exist and might develop positive wellbeing outcomes between GPs, but his subsequent work in 2015 and 2018 was to research formal group and inter-professional supervision.(37, 38, 41) Maslach and Leiter in 2017 reported that burnout in healthcare environments, not specifically GP focused, could be mediated by positive social relationships promoting civility, teamwork and positive appreciation.(44) However, they suggested more research is needed to develop new interventions promoting social relationships.(44) Peer relationships have repeatedly been suggested as mediating workplace stressors without further exploration.(3, 132) Most recently, Foo and colleagues in Australian general practice described a peer-networked learning health system; however, the relationships that facilitate this important outcome were not examined.(100) Therefore, no research has particularly focused on the psychodynamic nature of the GP-to-GP relationship as a dyad or how paired social relationships might work within the context of the Australian GP workplace.

Thus, we are led to the research questions, detailed in Chapter One.

2.9.0 CONCLUSION

There appears to be no other research examining a construct that is called or approximates GP peer connection. Nor has any established research provided any depth to an understanding of GP-to-GP relationships, the barriers and enablements, nor the role these relationships might serve, independently of where they are experienced.

Chapter Two in review

- The places where doctors congregate include learning groups and therapy groups.
- Learning groups exist as networks, as structures and as outcomes.
- Therapeutic groups are described as Balint groups, peer support groups, supervision groups and various places.
- There are motivations and aspirations for isolation and collegiality.
- Peer and professional support is opaque and underdeveloped.
- There is an identifiable gap in the research: there is no research on informal supervision as a learning model.
- Peer relationships in general practice are poorly described within the literature.
- Peer connection may be a mediating relational factor that is under-resourced and under-recognised but contributes to the general practice workplace.
- The quadruple aim is part of an approach to health system reform and includes clinician wellbeing.
- There is a common framework between learning and therapy.
- The Rogerian framework, history, transition and components have been descibed.

CHAPTER THREE: METHODOLOGY

This chapter describes the position of the research and the underlying ontology, epistemology and axiology. The main theories applied include constructivist principles and pragmatic influences. There was also an existing 'Rogerian' framework for relationship research which contributed to the approach. An exploratory research design was used given little was described on this topic within the literature. Therefore, highly reflexive and flexible thematic analytic principles were iteratively and carefully applied within the exploratory design. Details of the author's work in clinical general practice and the intersections with research production will be reflexively stated.

3.1.0 INTRODUCTION

In this chapter, I explain the position of the researcher and the paradigmatic and world view taken by the researcher. I describe the theoretical approach used to guide the data collection and analysis. I show why I have used these theories to explore my research questions and how these guided the design of the research and data analysis. I then detail the research design.

I will describe the approach taken to explore the research questions and how this research came to be. I take the reader through my role in developing this idea and my relationship to the research. Notably, I do not come unburdened by theory or experience. Qualitative approaches utilising flexible constructivism and pragmatism are described in this chapter. The underlying development of the philosophical approaches is considered in the context of the Rogerian framework and provides an up-close approach to the social constructivism of peer-to-peer relationships.

3.2.0 THEORY AND APPROACH TO RESEARCH

Truth is contested in a dynamic flux between objective out-there reality and subjective in-here experience.(198) Within research communities, truth and reliability are historically and philosophically contentious as a matter of course and accepted within the broad domains of science.(199, 200) Bourgeault illustrated the continuum of theory within the field of ontological and epistemological positions, as reproduced in Figure 3.1.(198)
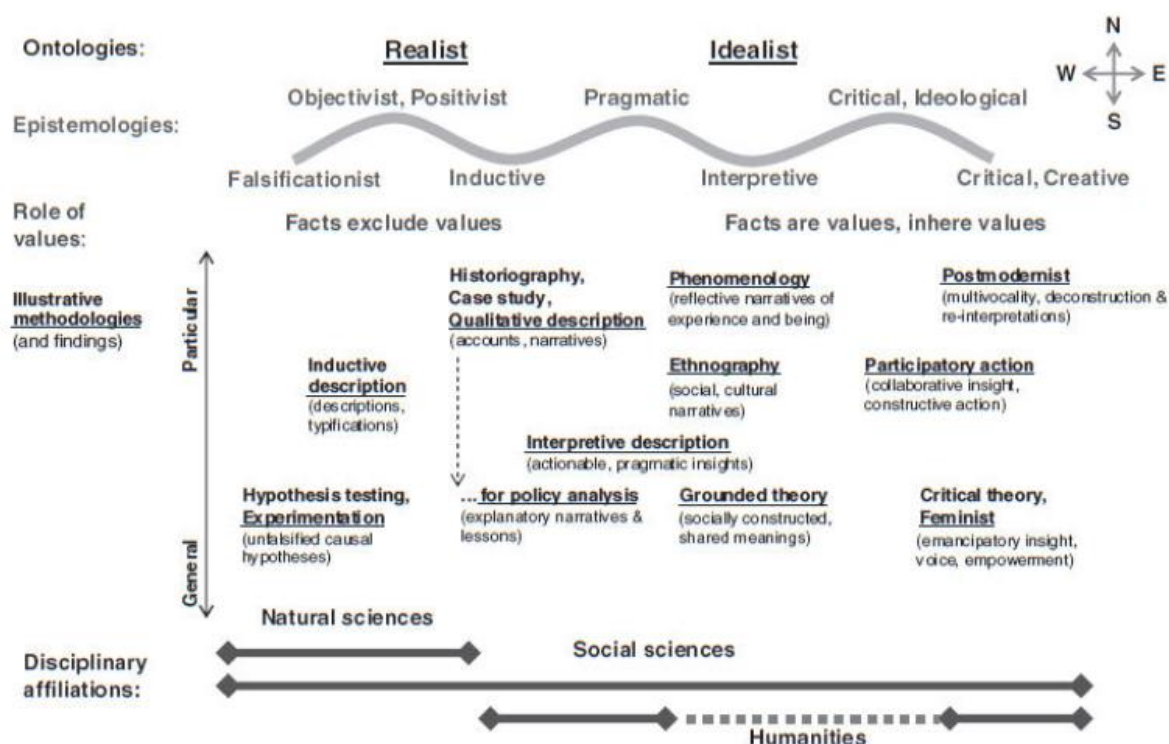
Figure 3.1. Ontological and epistemological fields(198)

Although by indicating a linear relationship Figure 3.1 has a degree of limitation, it provides a useful orientation. Linearity is another issue within research philosophy as, particularly in idealist philosophy, there can be arguments for some fluidity when in complex and applied areas of human research.(198, 201) On the other hand, theoretical flexibility and fluidity can be immensely irritating to pure methodologists. I have remained, however, within the constructivist paradigm. I have adapted a smaller theory for psychodynamic relationship work using pragmatic influences to encompass the general practice workplace.(49, 202-204)

The ontology of the knowledge world of general practice is a difficult one. This research uses a reflexive idealist and an interpretive approach and, notably, this problematically intersects with a positivist world. Yet this intersection is examined from a qualitative perspective. This might, on first view, be considered a potentially problematic stance and demonstrates some challenge in the separations of qualitative and quantitative approaches as they relate to EBM. This challenge is well noted in ontological discussion of the knowledge worlds of science and general practice in the academic literature.(51, 52) This thesis study, therefore, is based in the idealist part of the

ontological field. Particularly within human social interactions, the "truth", or – my preference – the word "knowledge", is constructed within each participant's own dialogical experience. However, the mutual exclusivity of objective out-there reality and subjective in-here truth is rejected and some tolerance of a continuum of complementary paradigms is assumed. That is, knowledge has persisting dualities, instability and tension within its nature. This tension or instability is important to acknowledge as an underlying "problem" of knowledge within the field of general practice.

The epistemology or "how we know" is, as Crotty suggested, at times intertwined with the ontology.(199) My position is therefore a flexible constructivism, perhaps anarchic and decidedly secular, but still within constructivism overall and including collective iterations towards truth. My position is supported by other philosophy of science scholars who reject a dichotomous view and support pluralistic integrated constructivist theoretical flexibility.(51, 200, 204)

The pragmatist view, that truth/knowledge "leaks in" with abductive iterations but may never reach an asymptote of "truth", is a reasoned and helpful theory.(202, 204, 205) Pragmatic epistemic approaches are not inconsistent with constructivism, but importantly pragmatism argues for collective iterations towards knowledge.(204) Notably, the omnipotent view of knowledge is not clearly established in any irreligious paradigm.(206, 207) This was, therefore, a reasoned but flexible design appropriate for exploration of a poorly explored concept and it related to the observations I had developed in the medical settings of my work as a clinician. In other words, as a GP I am acutely practised in balancing and tolerating the positivist view of science in interpretive qualitative constructivist paradigms of patients' own belief systems.

3.2.1 The reflexive approach

In constructivism, inquiry into knowledge is value bound and can be explored using the values of the researcher, which is called the axiology of the research inquiry.(208) So, declaratively, I am white, a woman, heterosexual, a former practice owner, an educator, a clinician and a mother who is relatable in various ways to those I have interviewed. My years as a clinician have brought understanding of the positivist world and influenced a pragmatic theoretical approach ideal. I understood the dynamic of time captured in GPs' reflections on work during the interviews. I had

also observed the relational intersubjective spaces of work. Notably, I was not within my senior political positions until much of this research was completed and certainly was not involved in those during the interviews. There may be less apparent ways of relating that remain unknown to me. I was operating, however, as a researcher-academic with Monash University. This new facet of my being "the researcher" appeared to be naturally accepted by others. The accepted researcher position shaped the acceptance of my own voice in this role. It is, as Hertz suggested, the many selves of a researcher, both insider and outsider within the field.(209)

Insider–outsider positions consist of a researcher coming into an area in which they have worked as an insider and now return as a researcher.(210, 211) Although I did not yet have a term for this constant lens adjustment, I settled upon the word "dance". This word, I later discovered, was used by both Keikelame and Ryan.(210, 211) Keikelame reflected upon her research as an African woman in African communities.(210) She described both the dance of positionality and yet, despite the familiarity, also being ready for serendipitous and unexpected findings in the field.(210) Exploratory emergent design and interpretive thematic analysis allowed this dance to contribute to the depth of my findings.

In a paper on reflexive thematic analysis, Braun and Clarke described the deeply deliberative and immersive and creative process of producing qualitative research(212) That is, the researcher is an instrument of positivity, bringing knowledge to the project through a lens of interpretation. Notwithstanding the theoretical approaches, the base ontology and epistemology need to be philosophically sound. Greenhalgh described the complexity of the health system that cannot be deconstructed into components and how the fuzzy boundaries make a reductionist approach impossible.(213) Through being immersed in the field I know these boundaries well. I understand the inherent tensions and paradoxes of the system my participants were working in. Yet in approaching the participants I needed to leave part of that self behind or puzzle over the uncertainty, interrogating myself carefully and consistently as to the fuzzy borders of self and other, of individual and system, of opinion and truthiness. There is an honest brutality to sitting in front of a whiteboard gazing into the middle distance and replaying all the research background, the

design and questions, the theory, recorded data, the visual data, the nonverbal data, over and over. Themes do not emerge, a dictum from Braun and Clarke ringing in my head.(214)

Finally, Finlay described reflexivity as a contested and ambiguous process, and the difficulties of where to begin navel gazing and where to end endless self-reflection not well delineated.(215) As Finlay suggested, there are many ways to represent reflexivity from a single paragraph in the methods section through to acknowledgement of a more explicit continuous process throughout the research project and evaluation, the latter of which is my preference.

3.2.2 Theory

Theoretical heterogeneity is consistent with a continuous but coherent focus, as described by Sinkovics, and is an adaptive approach for an exploratory emergent topic.(216, 217) Focusing and refocusing of lenses, yet not losing the coherence of the exploration, were at the forefront of my mind when approaching the analysis. The theoretical approach used to help focus the data and answer the exploratory questions are based on social constructivism as the major epistemology. But the interpretation of the data draws on pragmatic elements and influences, and a humanistic Rogerian lens as a psychodynamic relational lens. These approaches are next clarified in turn as to the purpose, approach and complementary intertwining of the researcher position for the purpose of responding to the research questions and data.

Constructivism and knowledge management in general practice

Learning is a lifelong pursuit required of GPs. A constructivist philosophical approach, therefore, is well suited to exploration of a "relational experience" situated within each GP's personal realm of cognitive learning and social experience. Multiple participant voices build across the dataset to deny, enlarge or confirm understandings of peer connection.

Within constructivism there are various schools of thought including purely cognitive constructivism, which relates to the internal cognitive world of the knower.(98, 218) Other schools include those who argue there is a social constructivism with a group influence on the construction of knowledge and then those who feel there are additional political influences on the construction of knowledge, such as the feminist constructivists.(198, 200) Whatever these schools' ideas, either

sensate or dialogic or social or political, the commonality is that knowledge is constructed within an individual with variably influenced perception.(219) For the purposes of exploring peer connection I have used a flexible constructivism which has a position within the philosophy of idealist constructivism.(198, 200, 220)

The cognitive constructivists

The constructivist movement arose predominantly from the cognitive work of Piaget but sought primarily to place learning or knowledge within the social context of the learner.(221) Piaget theorised in cognitive and learning theory that knowledge is constantly under construction within the human being as an organism in continuous development.(98) However, in 1982 Von Glasersfeld,[9] whilst sifting through Piaget's voluminous writing, noted his lack of definitional clarity on constructivism and some apparent contradictions.(218) When Von Glasersfeld came to interpret Piaget's meaning, he noted ironically that his own personal understanding of Piaget's "constructivism approach to knowledge" was indeed constructed through his own interpretative framework. For instance, Von Glasersfeld noted that Piaget spoke in many different ways to biologists, mathematicians and psychologists.(218) Von Glaserfeld wondered if this was deliberate. Did Piaget allow the reader to form their own view?

It remains, however, that from an individual knowledge perspective Piaget's original cognitive theory is salient. Firstly, there is "assimilation" of existing related knowledge into known cognitive frameworks. Secondly, there is a more difficult "perturbation", which is when there is dissonance in apprehending very new knowledge which needs "new" cognitive frameworks.(98) The alignment between dissonant experience and learning theory was inherently useful in this exploration of GP relationships. The concept of dissonance can be experienced intrapersonally, interpersonally or socially and can stimulate changes within the learning contexts of general practice.

For instance, I observed the world of general practice to be partly constructivist with regards to the particular personal views and contexts of patients and of physicians.(139) However, the world of

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[9] Some academic references spell Von Glaserfeld without the 's' on the end and some spell it Von Glaserfelds or Glaserfeld. I have elected to use the spelling within each reference as it applies. However, in a generic call to the body of work I have used the more simple spelling Von Glaserfeld as this seems more linguistically like a derivation or evolution of a name's spelling.

medicine as accepted "knowledge" and in training was largely positivist.(140) The GP response to that inherent contextual paradigm-based tension was potentially heterogeneous. This is the caution Sackett issued with EBM as evidence-only guidelines that ignore patient and physician context.(139) This is acknowledged as an essential philosophical tension within the thesis.

Both Von Glasersfeld and Piaget are considered to be at the "radical" end of constructivism theory as pure cognitive constructivists.(200) However, the social experiences of the GPs being the subject of the inquiry required a more expanded view of knowledge construction.

The social constructivist in social spaces

In 1966, the sociologist Berger asked these fundamental questions of knowledge:

> What is real? and How is one to know?(222) p13).

Berger proposed that an individual is involved in a "dialectic" of understanding and meaning making between the internal world of self and the external world(s) in which they are involved.(222) The external is characterised as an individual having an "experience" and more recent literature links constructivism to a social experience, particularly relevant in adult education.(94, 219)

In 2013 in the domain of adult education, Kenyon and Hase described constructivism as:

> The notion that people construct their own version of reality using past experience and knowledge, and their current experience.(94) p21)

Kenyon and Hase developed the notion of adult learning as heutagogy (self-determined learning), a development of andragogy which includes the interdependence of social experience and adult learners generating constant reflective iterations of knowledge.(95) These knowledge-making educational theories are indeed iterations of social constructivism with a nod to the pragmatists with regards to reflective iterations. Constructivism therefore within learning worlds is more recently affirmed to be a nonlinear approach to organising meanings and understandings from the world with the potential to reorganise meanings.(98)

Social constructivism has therefore allowed exploration of the various realities of the participant voices in their social spaces.(223)

The intersubjective constructivists and the humanists

Much less is written about intersubjective dialogue within the particular social space, with undefined words used such as "social" or "experience". Few constructivists have addressed affect or emotion in relationships as knowledge directly. Peer connection seemed to involve peer-related knowledge gathering, so intersubjectivity was highly salient. There was an intersubjective space of affective knowledge construction which seemed epistemically neglected, with the exception of the science philosopher Longino.(51, 200) It was argued by Phillips that Longino's proposition might require an epistemological shift in the unit of analysis to a dialogic intersubjective constructivist position.(200)

I responded to the social dialogic intersubjective space with psychodynamic theory. Psychodynamic theory helps to address this intersubjective space as a way to contextualise its construction.(4, 47, 49, 200) This intersubjective constructivist principle has been here applied particularly within a psychodynamic Rogerian framework as a "relational dialogic".(4) I found Rogerian theory, as a constructivist view on the intersubjective, particularly useful for affective knowledge work in this research project.

Very few learning theorists or epistemic philosophers viewed or named the affect in relation to any form of medical knowledge. The epistemic bias towards cognitive and positivism and away from human relationships seemed strong. Pragmatism addresses this tension and has retained an influence on the research and the researcher.

The pragmatic influence

The overall theoretical position remains constructivist, but adopts a flexible theoretical approach that includes some pragmatic elements. Peirce suggested in 1905 that the new theory of pragmatism holds the theoretical position that there is an:

> inseparable connection between rational cognition and rational purpose.(205)

In other words, more might be understood about the concept under research by looking at how it is used. Pragmatism is more focused on the "outcome and what works", which seemed applicable to the desire to understand the uses of peer connection in the GP workplace.(198) Pragmatism uses

abduction in thought and interpretive design, and is a position describing an iterative process stretching between pure deduction and induction from raw data.(202) Timmermans suggested that in research terms, abduction refers to a creative process using inductive and deductive processes to allow new theory or hypotheses to develop from "surprising" research findings.(202) This reappraisal of theoretical influence is consistent with an exploratory qualitative emergent research design described by Cresswell.(224)

Pragmatism has become the dominant paradigm underpinning mixed methods research and indeed the research reported in this thesis was initially conceived as a mixed methods study. The research evolved however into a fully qualitative deep exploration of the concept of peer connection. Despite this, pragmatism has been used in solely qualitative work and found to be valuable in its elasticity of ontology and epistemology.(202, 204) The approach I have taken allowed for an open and exploratory view of a complex concept which was adaptive to the data. Using some pragmatic and psychodynamic influences within a constructivist worldview allowed unexpected elements to appear as well as grounding it within the context of previous literature and theory to expand upon and build depth to the concept of peer connection.

I have taken this positioning carefully, after deep consideration and reflection upon the data and goals of the research. Without a pragmatic influence, the visible ontological tension within the GP participants as they negotiated a positivist's world of training, and a socially constructed world of patients' needs would have remained theoretically silent. I suspect that I brought this lens with me as a clinician myself trained in the same way as my participants.

A critical realist lens is quite similar, however has more of a macro lens view encompassing the influence of structures upon ontological reality.(225) This research began with an exploration of a micro view upon a proposed relationship that had conceivably already developed peer congruence. Thus, the relationship which the research explored required a definition moving beyond structural relations which may have already influenced the formation of the peer relationship under examination. Roy Baskar, the originator of critical realism has said: *"All we can do is to attempt to fashion language in such a way that it expresses as adequately as possible*

what is independent of us. That is obviously a dualistic formulation, but I think it is quite adequate for empirical science." (226) Yet he also argued the ground substance of reality being a *"cosmic envelope"* where the ontology of reality was a deep consideration of a 'meta-Reality' and the dissolution of the duality of object-relations.(226) Critical realist theory therefore was more concerned with the ontology and yet rather ironically relied on pragmatics to describe what might be independent of us. For this reason and for the desired outcome of the research to be an application of a useful concept for busy General Practitioners I have stayed close to pragmatic theory and tried to elucidate a useful already existing but unnamed concept. Undoubtedly there is overlap in these lenses, which is well acknowledged but the main goal was exploration of a concept by its purported actions which fits more closely to pragmatic disciplines.(225)

The whole idea of the research was grounded in my practical observations that this concept appeared to be functioning in important areas of work practice. This has not violated a mono-theoretical paradigm of research construction but allowed that in theory and in theoretical problems of general practice there are influences and positions held concurrently that need articulation.

Finally, in order to look closely at the many interpreted intersubjective contexts of the relationship and dialogue which were constructed in a peer-connected experience, the work of Rogers in learning and therapy environments has been utilised.(4, 48, 49, 115)

3.2.3 Relationships, psychodynamic theory and using the Rogerian lens

As introduced earlier, Balint developed a well-known psychodynamic approach within medical consultations which contributes to the therapeutics of the GP–patient relationship.(47, 103) The GP–GP relational context in which peer connection was first observed by me appeared to fit within this psychodynamic approach. However, Balint's work was ultimately built upon the work of Rogers and the humanists, moving the individual towards actualisation and reducing internal dissonance.(4, 47-49). I reasoned it was useful to have some contextual medical basis such as Balint's for the psychotherapeutic theory application.(103) The psychodynamic approach of Greenhalgh and Heath was theorised to be of use in a number of subjective approaches suggested for therapeutic relational research designs.(48)

Rogers theorised that therapy and learning require the same triad of prerequisites: empathy, unconditional positive regard and congruence.(4, 49) Due to these overlaps between the environments of learning and therapy, a focused Rogerian perspective was used to guide some of the interview question frame.(4, 227)

The schools of early humanistic psychologists support a concept of self-awareness but resist a deconstruction of human experience to only the individual.(115, 228) This means there are fuzzy edges of the research unit of analysis, peer connection, with the intrapersonal, the interpersonal and the outer world of human beings, identity, learning, support and relationships all having interdependence.(4)

A component of the Rogerian lens, empathy, is earlier defined as a cluster of different cognitive, affective and behavioural prosocial motivational altruistic dimensions used to enter these relational spaces.(180, 229) So the Rogerian relational lens has been used to expand upon a cognitive view of learning but simultaneously provided a framework for affective-social aspects of learning and also of experience and behavioural components of intentional relationships in general practice. The work of Rogers focused on ideal conditions for both therapy and learning just as I was apprehending that both learning and a form of therapy were occurring simultaneously within general practice peer dialogues.(4, 49) Thus this psychodynamic lens provided a framework for exploring the dyad of GP peer to GP peer interaction.(48)

3.2.4 Putting it all together: theory

In this section I have outlined the position and approach to the research. Constructivism allowed multiple participant voices and elastic tension with other theoretical influences. Further clarity was sought through a pragmatic-constructivist view of the uses of peer connection. Using psychodynamic relational theory in learning environments as an exploratory guide allowed a view of the social and emotional contexts between peers. Using a psychodynamic theory allowed some connection to existing theory on intersubjective contexts of therapeutic relationships and expanded it to a GP-to-GP experience. Overall, the methodology has allowed me to draw out of the data the contextual conditions of the concept using constructivist approaches. Qualitative exploration was

essential in order to develop an exploration of a little-documented human response to workplace problems.

This approach explores how existing theory and reported practice might inform peer connection as a concept, explain the presence of peer connection and describe the purpose of connecting with peers at work. There was considerable reflexivity within this project, which is consistent with the emergent research design. The research design is described in the next section.

3.3.0 RESEARCH DESIGN

An emergent exploratory research design is consistent with an "in-theory" development design described by Creswell.(223) I was aiming for flexibility in the research approach but mindful that coherence with ontological and epistemological positioning of the research was essential. This typology of qualitative emergent design is a circular iterative approach to research, an essential part of qualitative exploration.(230)

This flexible emergent adaptation has been used in other health settings such as by Busetto when investigating a large, complex integrated care project for chronic health conditions.(231) Consistent with emergent qualitative research designs, the exploratory approach here allowed openness to develop the definition of peer connection.(223, 232) The design was challenging and incorporated a high degree of reflexivity and adaptability in response to the data. Very early on the research design was considered to be a mixed methods procedure and the possibility of a validated psychometric scale considered.   This design was shortened due to the need to more fully understand the presence and shape of the concept studied. The deep immersion into qualitative methods and conceptual development of peer connection then shortened the design and deepened the exploration.

The research design map is summarised and illustrated diagrammatically in Figure 3.2. This shows the circuitous nonlinear, iterative process with triangulation and checking across data sources, researcher, theory and literature inputs.
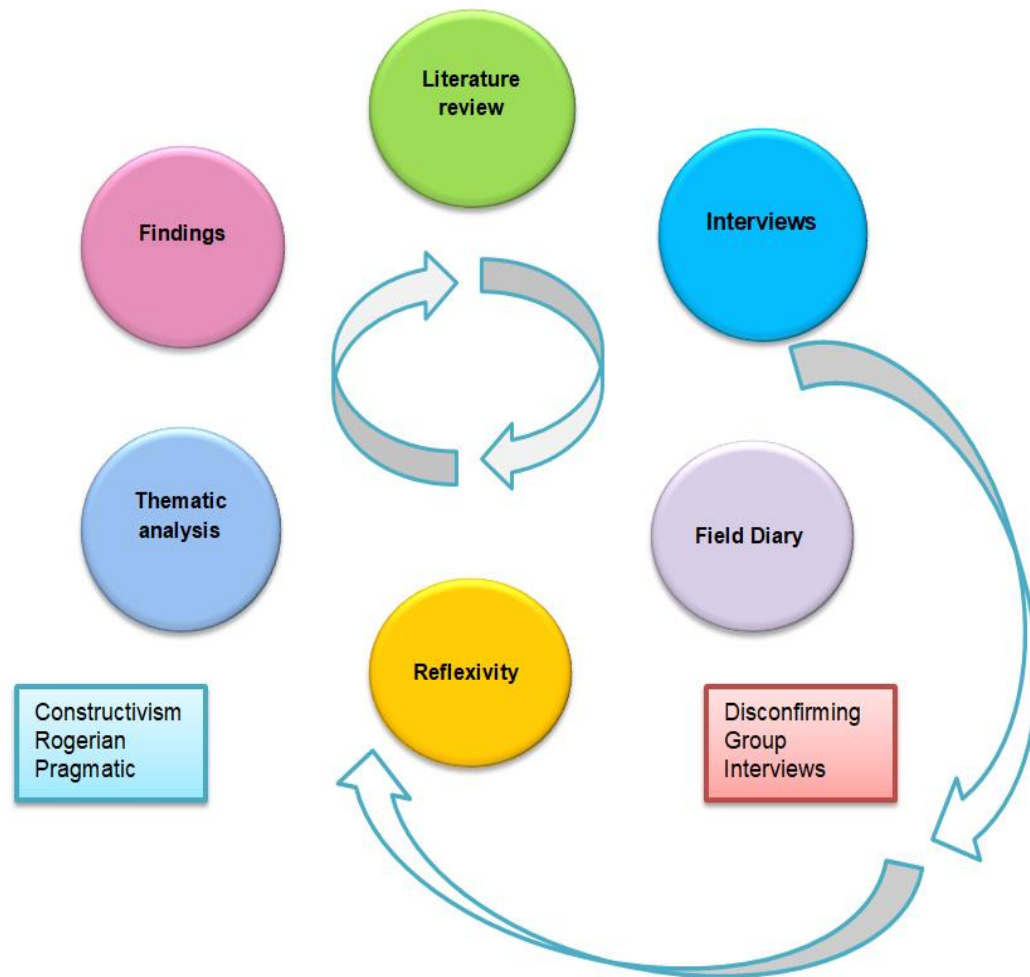
Figure 3.1. Research design

3.3.1 Why not other designs?

There were difficulties using traditional and prescribed methodologies and methods in approaching this topic. Grounded theory, phenomenology, case studies and narrative analysis all came with ready-made methodologies and methods.(233) Exploratory research posed a problem as I did not know what I was exploring other than my curiosity and observation of peer connection in practice. Grounded theory was discarded early on as I did not feel I could approach this topic naively. Hume originally described this philosophical difficulty as the "problem with induction" and I found this also to be problematic in relation to the degree of lived experience I brought with me.(202) Yet some such as Charmaz argue that grounded theory has developed somewhat to involve constructivist and postmodern approaches.(234) Despite this, grounded theory is limited to a theoretical outcome which is not able to be predicted at the beginning.(217) Thus, grounded theory had the potential to limit the research findings.

Phenomenological approaches and methods are broad and difficult to define ontologically and are designed to deeply describe meaning and experience.(217, 230) Phenomenology seeks to bracket away by reductive technique "concepts, prejudices and theories" to get to the essence of a phenomenon.(230) However, philosophically I was more convinced as per Longino that the unit of analysis included the relationship and intersubjective space, as well as the individual GP.(51, 200) Furthermore, theories and concepts including affect, and social experiences meant to bracket these away was too reductive for a concept that needed a framework. To remain open flexible and curious was a consideration rather than a new concept being reduced to an essence before it had been described. For an exploratory study, phenomenology was too reductive and restricting. Phenomenology made assumptions about the conceptual existence of peer connection before the concept even had a framework.

Smith described a specific type of phenomenological approach which is interpretive phenomenological analysis.(235) Interpretive phenomenological analysis creates "meaning-making" and has specific procedures such as idiographic thematic development with usually small sample sizes.(217) However, I was still yet to define and describe the budding concept of peer connection.(236) Deriving meaning from individual participants was problematic in relation to a concept I had yet to define and outline. Pursuing depth only would have negated the potential breadth needed. For this reason also, very small sample sized methods were not considered appropriate, such as narrative methods and case studies, where peer connection may have had a limited exploration. My aim was to explore this topic more broadly, finding commonality across a dataset. Further, I wanted to go beyond understanding. I also wanted to explore pragmatically peer connection with regards to purpose and application. Therefore, the emergent exploratory design was data driven and allowed more flexibility than pure phenomenological methods.

Ethnographic approaches were also considered, however, the time and resources needed to apply this research design seemed somewhat redundant due to my already considerable experience in the field. I had already observed GPs in my lifetime at work and this experience had brought me to the research. It might have been useful to consider observing GPs at work or educational meetings; however, this would again have been a complex undertaking in order to understand the

broad range of settings in which GPs find themselves resourcefully utilising peer connection. My reasoning was that one-on-one interviews rather than observation would provide a confidential and comfortable peer-connected research experience for GPs to recollect their own life stories of work-based relationships and the utility these offered. Being both a research student and a working GP was helpful for participant engagement with me and equally worthy of contemplation in multi-positional reflexivity throughout the project. Ethnography may have application in postdoctoral work exploring aspects of peer connection within locations, but again I was seeking a broad view for clarity and understanding and did not want to limit the scope.

As explained earlier, a more flexible constructivist view allowed the ontology to adapt from a cognitively located to a socially constructed and contextually based appreciation of the responses within the GPs' relational experience. Pragmatism and social constructivist perspectives allowed this research to consider the ontological reality as a "what works" approach and allowed some dualism and tension in the discussion of objective truth.(200) The research design, therefore, was flexible, open and emergent. This held ontological requirements loosely yet accommodated the need for consistency with the flexibility of an exploratory and underdeveloped topic. There was significant discipline required to keep that flexibility bounded to the ontological and epistemic assumptions.

In many ways qualitative research approaches have many overlaps and the open design allowed me to address some of the meaning making as it might arise or to go deeply such as I might have with case studies or narrative methods. Merriam and Tisdell noted that many qualitative methods overlap and this needs justification within the particular paradigms of the research theory.(237)

3.3.2 Incorporating thematic analysis into the research design

Thematic analysis is defined as a "method for identifying themes and patterns of meaning across a data set".(207) Thematic analysis has an evolving development from 2006 when Braun and Clarke first published their now widely cited paper on the technique.(238) Thematic analysis is not tied to a particular theoretical tradition and it is this flexibility that works well for an exploratory study.(238) Since the original Braun and Clarke paper provided a guide for thematic analysis method, there

have been further iterations of types of thematic analysis, described later in this section.(212) For this project, which required a high degree of response to the data, the reflexive type of thematic analysis detailed by Braun and Clarke was chosen.(212) This required, again, intellectual discipline and a very conscious exploration of peer connection in accordance with an open and emergent design, particularly combined with the challenges of a non-traditional theory upon a new topic. However, as exploratory work is exploratory by definition, reflexive thematic analysis is an ideal approach for a new topic compared to a more rigid technique that was potentially more prescriptive and which might have missed elements of conceptual development.

Thematic analysis firstly allowed the research data to flexibly guide the analysis. Secondly, thematic analysis was chosen for the purposes of analysing the participant's audio-recorded responses to semi-structured questions and the transcribed data in written format. Finally, thematic analysis was chosen to make sense of the body of data from a meta-view.(236) This method allowed "researcher subjectivity as a resource (rather than a problem to be managed)".(233)

Criticisms of thematic analysis include the risk that it can be poorly applied, for example, with grounded theory "mashups" such as using coding of reliability measures or by treating thematic analysis as one single approach and confusing "domain summary accounts" with fully interpreted themes.(212) There are those who consider thematic analysis "atheoretical" despite numerous texts describing it as a flexible method that is able to use a flexible research-directed theoretical methodology.(233) Thematic analysis has been critiqued as too basic a method; however, if well applied thematic analysis requires a degree of intellectual nimbleness and considerable interpretive reflexivity.(214)

The advantages of thematic analysis for an exploratory topic therefore include that it is a flexible, adaptive research method that both allows and demands considerable theoretical reflexivity, is data driven and requires a deep engagement with the research design. Braun and Clarke have been instrumental in developing thematic analysis as a standalone method.(207, 212, 214, 233, 238, 239) After they published their 2006 paper on the typology of thematic analysis it became an increasingly used method for qualitative analysis.(238) Since then, Braun and Clarke have

developed thematic analysis into an umbrella term largely based on three main approaches.(233) These are:

1) cluster and coding reliability approaches
2) codebook approaches
3) reflexive approaches(212)

Coding reliability thematic analysis, as Guest, Macqueen and Namey indicated, is a type of thematic analysis which applies a structured method and leans towards positivist philosophies with interrater-rated agreements in often quantified language.(212, 240) Often themes arise early within the method and lean towards more of a domain summary or descriptive type of theme.(212)

Codebook type thematic analysis is a method involving a structured codebook and coding frame into which the data fits. Codebook-driven analysis is often used in projects with multiple coding researchers and includes claims about having a "reliable", consistent coding process. A drawback, however, is that the codebook may enable research teams to apply consistent coding frames but arguably may have less interpretive reflexivity embedded within the analysis.(212)

Reflexive thematic analysis is a method which positions the researcher centrally in the analysis. Thus, the researcher needs to have a clear understanding of the theoretical assumptions underlying the project. Codes are developed with definitions but constantly reviewed and potentially reinterpreted. Notably, the researcher generates themes and, importantly, themes do not ever simply "emerge" inductively from the data but are produced using theory and by the reflexive interpretive researcher as an "analytic output".(212)

This project utilises the reflexive thematic analysis typology described by Braun and Clarke in 2019.(212, 214) In my view, this has allowed for an initial semantic approach staying close to the data followed by ever-reflexive cycles of iterative deduction, interpretation and analysis.(238) Thus the criticisms of thematic analysis that it is unsophisticated or reliant on descriptive development only are limited criticisms as the analysis can develop beyond the semantic level to a deeply immersive reflective and theoretically informed interpretation. Reflexive-interpretive thematic analysis was applied using a unique theoretically driven relational approach to a process of human

adaptation in a demanding, scientifically grounded workplace. As an emergent exploratory project design, this has required considerable and thoughtful engagement with the theory and methods.

3.3.3 Use of semi-structured interviews

Semi-structured interviews were the most appropriate method of obtaining the data from expert GPs. McIntosh traced the origins of the semi-structured interview to 1946 when the focused interview arose.(241) Liamputtong situated the semi-structured interview midway in a range from maximal control of the interview schedule (as occurs in a standardised interview) through to minimal control of the interview schedule (as occurs in informal conversational interviews).(242) Finding a balance between a formal rigid interview guide and an informal interview allowed freedom and guided participants to provide information-rich data on the exploratory topic of peer connection.(241)

A flexible interview schedule was consistent with both the constructivist and pragmatic paradigms of the research. A highly structured interview risks the researcher becoming the knower, confirming knowledge of self rather than exploring the participant's subjective experience.(236, 241, 242) Having an interview schedule broadly informed by the available literature, combined with a flexible interview style, allowed an exploration of the GP participants' own reflections on peer connection. In summary, there is always a limitation that without free-flowing discussion some nuance may be missed, but equally there is a practical containment of the interview to the topic and acknowledgement of research resources. Briefly, the question guide was developed and informed by the literature search, with supervisor input and reflection then pilot tested before implementation. Additional detail regarding the development and use of the semi structured interview schedule, occurs in the next Chapter four and the schedule of developed questions is in Appendix six.

3.4.0 CONCLUSION

Engaging in a reflexive emergent exploratory design generated the ability to respond to explore and respond to the participant voice, collecting rich, thick data about the emergent concept.(224) The approach was coherent with the paradigms and theory underpinning the research and allowed

the researcher to explore expected and unexpected findings as they arose using the methods described in the next chapter.

Chapter Three in review

- The research has used a qualitative approach.

- Constructivism allowed multiple voices to shape the concept.

- Pragmatism allowed the concept to express workplace outcomes.

- The Rogerian framework defined the concept within psychotherapeutic and cognitive frames.

- The research design was explorative and emergent, suitable for researching a new topic.

- There has been reflexivity in axiology and how my experience enhanced, interpreted and limited the exploration.

- There has been use of a thematic analysis typology.

CHAPTER FOUR: METHODS

This chapter is more traditionally organised as a methods chapter. It describes a two stage purposive sampling strategy. Qualitative data collection follows using in-depth semi structured interviews. Data management process, and reflexive thematic data analysis and describes the procedures for ethical conduct of research. Notably in a qualitative reflexive design it can be somewhat artificial to separate aspects of methods, findings and discussion. When illustrating the method, this is made clear utilising a reflexive example only and the fullness of the findings are kept separate in the next chapter. Iterative reflexive thematic analysis methods have described this challenge. As much as possible, without losing either tradition or innovation I have danced that iterative, circular-line.

4.1.0 INTRODUCTION

This chapter describes the specific procedures used to answer the research questions. Consistent with a reflexive approach, the formal separation of steps is relatively artificial and this is acknowledged. The process is iterative, interpretive and generative, consistent with qualitative methods.(243) The COREQ (Consolidated criteria for Reporting Qualitative research) statement was used to reflect upon comprehensive and quality reporting.(244) Further reflection was undertaken using criteria for achieving rigour in qualitative research described by Lincoln and Guba in their four evaluative criteria for trustworthiness: 1) credibility; 2) transferability; 3) dependability; and 4) confirmability.(244, 245)

A completed COREQ statement for this research is provided in Appendix Two.

4.2.0 SAMPLING STRATEGY

The sampling frame was limited to fully qualified Australian GPs in generalist practice who are able to work independently in Australia. The sample of 29 general practitioners were recruited in two stages and were interviewed in 2016 and 2018 respectively.

We recruited GPs with five years of independent practice providing generalist care. Participants needed to be registered as general practitioners with the AHPRA in active practice and participating in small-group learning formats, journal clubs, group practice meetings, professional reflection groups such as Balint, social media for professional purposes, and/or conference-based GP participation events.

Key inclusion criteria with reasoning to follow.

1. GPs' post-vocational training with five years of experience.

2. Non-supervised GPs

3. Broad-based family care

4. Any size practice

5. AHPRA registered

6. Active patient care within the last 12 months

7. Unrestricted practice

8. Currently and voluntarily using small-group learning formats, journal clubs, large group practices, professional reflection groups such as Balint, social media for professional purposes, and/or conference-based GP participation events

In the first recruitment stage, I was seeking GPs who had voluntarily used and thoughtfully engaged with peer learning groups or peer-connected experience of any sort, to explore the "what and why" of the concept and its impact on their daily lives. In the second stage of recruitment, I was actively seeking GPs who appeared to *not participate* in peer-connected experiences as a disconfirming or perhaps deviant case sample.

GP participants had to have had at least five years of independent active GP practice within Australia in order to avoid any effects of training that might mandate peer work. This meant motivation to connection shouldn't be attributable to any other mandated groupings. Further, the practice type needed to be generalist, first-access primary care, rather than single special interest primary care. This is because I wanted the independent drive to seek out the practice of peer connection to be due to the workplace itself and not to other factors like recent immigration. These five years also allowed for a stable development of independently derived professionalism. Further, I did not want the peer connection to be modified by recent graduation with mandated (not self-selected) peer groups in recent training, which might have buffered some of the related sustainability aspects I was exploring. We do know that some GPs choose to work in nonclinical portfolio careers in related non-patient contact areas to lessen work demands and risks of burnout.(246, 247) So whilst any amount of generalist practice exposure was sufficient for inclusion, any GP who was completely removed from generalist patient contact although still working was excluded hence the broadly based family care rather than eg skin cancer medicine. Any sized practice included solo practice in an acknowledgment that the GP workplace extends beyond the clinic walls and recency of practice so that a break from practice was not modifying some of the workplace stressors.

The second recruitment was identical to the first inclusion/exclusion criteria with the one exception that these GPs were identified by the first recruitment of GPs as GPs not appearing to voluntarily take any part in practice or peer related experiences. This was a reflection by other GPs who worked closely with them but had observed little to no interaction between the nominated GP with any other GP peers. A full list of inclusion and exclusion criteria are stated in Appendix Three.

4.3.0 RECRUITMENT STRATEGY

The sample process was begun by purposively selecting for a peer-interested GP group and then by a second snowball recruitment strategy for a disconfirming GP group. This strategy is well described by Patton: purposive sampling is "strategically selecting information-rich cases to study".(232) The snowball-selected group was selected by asking GPs who were selected in the first stage of recruiting, to identify GPs who they perceived, were not interested or did not

participate in peer-connected activities. A snowball recruitment strategy can be a part of open-ended exploratory designs when other information-rich participants are sought during the fieldwork by asking well-situated persons, in this case the current confirming participants in group one for others known to them. (232) This yields a potentially contrasting group to help explore the subject of research further. Patton described this as confirming/disconfirming purposive sampling but the second group could also be seen as a deviant case sample as they do not participate in (social) activities the dominant group (the self-described peer-connected group) see as the norm.(232)

The rationale for these methods was to obtain a confirming group and a potentially disconfirming group of GP participants who could inform the research question and enable comparison between groups.(223) I have called them confirming and disconfirming groups to address the recruitment strategy only and not the eventual findings. I note reflexively that these were presumed labels but helped to quickly identify and reflect upon the eventual results. This is discussed in more detail next.

4.3.1 Recruitment methods

Purposive sampling method: Confirming group participants were recruited using a purposive sampling strategy. In this case I chose key informants who exhibited the central phenomenon of interest, peer connection.(232, 248) Homogeneity, however, can be demographic, geographical or based on physical attributes or psychological or life history.(249) In this research, the sample was homogenous only in relation to the personal experience of a GP-based peer-connected experience that was self-reported. Thus, I chose Australian GPs who were able to inform the study on the use and understanding of the topic under exploration: peer connection. This included many of the formal and informal ways in which GPs relate to other GPs in practical work-related matters. This was proposed to include, but was not limited to: exploration of interactions within lunch rooms, conferences, therapeutic or learning groups, between-patient corridor consultations, work meetings and any other peer-group activity. This list was not exhaustive, but allowed participants to inform the research as to how and where this connected activity might occur.

The research was advertised via the 2016 Victorian RACGP newsletter, Balint society of Australia and New Zealand newsletter, Social media accounts, Twitter and a forum called GPsDownUnder, the 2016 RACGP Conference in Perth, and two convenience participants. Through their voluntary membership of a peer-connected experience, these GPs were thought to have apprehended in some way the intrinsic nature of the central phenomenon of interest: peer connection.

Snowball recruitment method: This strategy helped to find GPs who might understand the limitations of the central topic of interest: peer connection. This occurred after an initial review of the data collected from the peer-connected group of GPs described in the last section. The snowball-recruited disconfirming group was identified by the previously recruited peer connected participants who were asked to suggest other GPs who appeared to them to not participate in peer connected activities. These participants were contacted by emails with a follow up phone call. Snowball sampling of participants is considered useful for exploring characteristics of the topic within known networks which align with the research design.(232, 236) Thus, a disconfirming group for peer connection was identified by peers as allegedly not overtly participating in peer-connected activities.

In summary, the recruitment strategy was designed to collect data from both confirming and disconfirming participants. This is a method used to help strengthen findings and explore variation in the phenomenon of interest.(250) At the end of recruitment, two distinct groups of GPs were interviewed. The first purposively recruited confirming group was a 21-member group of GPs who were purposively selected based on meeting the inclusion criteria, that is, interaction and voluntary participation in GP peer groups or peer-connected experiences of any sort. The second snowball-recruited disconfirming group comprised eight GPs identified by the first participants in the group as colleagues who apparently had little interest or were uninterested in participating with their GP peers. The resulting demographics of both recruitments are described within the next chapter of findings under sections 5.1, 5.2 and a detailed description in 5.2.2.

Method of approach to participants: The confirming group was approached through an invitation in the regular newsletters from RACGP, AMA and Balint Society of Australia and New Zealand

groups. Posts on the Facebook group GPsDownUnder™ and Twitter were also used. Recruitment flyers were distributed to the 2016 GP16 Annual National GP Conference in Perth. The recruitment materials are included in Appendix Four. The potential reach was therefore Australia wide. Once it was established the eligible GPs had read the explanatory statement and met the inclusion criteria, a suitable time for meeting face to face in quiet surroundings was arranged. Ineligible GPs were thanked for their time and interest for responding. Consent was return emailed with the meeting time or written consent was obtained at the time of interview.

The second group of disconfirming participants were recruited with the help of an anonymous introduction from the confirming group participants. Without identifying who had nominated them, invitations by phone were extended to the nominated GPs inviting participation regarding their thoughts about the topic: peer connection. Explanatory materials were sent by email once participants agreed to participate. Once eligibility was established, explanatory materials and consent procedures were identical to those for the confirming group. Eight disconfirming GPs were referred by the confirming group and all eight agreed to interviews. There were two GPs in solo practice I identified in my local area as potential key informants for not participating in peer connection who declined to be interviewed after an email and a follow-up telephone call.

The first recruitment stage occurred between April and July 2016. The second recruitment stage occurred between April and July 2018. The second recruitment followed initial coding of the first group after deep reflection on the data. All identified participants in the two groups were contacted by email or phone and given electronic links to the explanatory statements and the consent forms. All details of data management and ethical procedures were detailed in the explanatory statement as well as in the methods section on data management to follow. The invitations and explanatory statements are provided in Appendix Four. There was no inducement/reimbursement offered to participate other than a thank you and appreciation for their contribution to GP research.

4.3.2 Sample Size

Qualitative sample sizes are usually determined on the basis of theoretical saturation or, preferably for thematic analysis methods, what is called data redundancy or data repetition.(240) Purposive recruitment of the initial confirming group continued until 21 GPs had been interviewed. It was at this point that repetition in the data corpus was occurring. Snowball recruitment of the disconfirming continued until eight GPs had been interviewed.

Recruiting this sized group, albeit large in the context of qualitative research was considered practical within the limits of funding and time. There was reflexive preparedness to review and revise this size constantly throughout the project. Disconfirming group sampling occurred after confirming group interviews had been completed and the transcripts had been reviewed several times. The disconfirming group sample was smaller in size and was considered sufficient to explore contrasting experience and perspectives of the phenomenon of peer connection. Once again, reflexivity during the process was essential and this is discussed further in section 4.4.2.

4.4.0 DATA COLLECTION

4.4.1 Setting of data collection

The different settings for the interviews were negotiated for mutual convenience and the comfort of the participants. These settings consisted of predominantly participants' clinics (places of work), occasionally Monash University offices and conference rooms, and one interview occurred in a private recreation area. Some participants allowed the researcher (KP) into their homes. All interview settings were deemed private and confidential spaces with minimal disturbance. There was an intent to have a comfortable and confidential discussion which potentially included some mildly emotional topics related to burnout and wellbeing. There were no other people present at the interviews other than the GP participant and the researcher KP.

As Malterud explained, an exploratory and in this case reflexive study cannot ever be complete on the nuance and range of the topic to be explored, but can provide new insights into the topic with some degree of challenge and contrast.(251) The demographic characteristics of any sample are nevertheless intimately related to the study findings and here reflected reliable depth of understanding of peer connection as understood by this particular sample. The characteristics of

the sample had an impact upon the data collected and this was intended to be a broadly heterogeneous sample in terms of practice location, gender, age and experience.(248) Therefore, the sample was intended to have breadth for the purposes of exploring the peer-connected experience in a variety of contexts.

In summary, this was an informing qualitative sample. There was some heterogeneity that was helpful for considering nuance in the experience and expression of peer connection within Australian general practice. The disconfirming sample group had some degree of heterogeneity of age and gender as well, but was more limited in geographical location than the confirming group. This was a practical consideration within the context of this research given financial and time restrictions.

4.4.2 Interview guide: semi-structured interviews

The interview questions were derived from the literature including theoretical approaches to learning and therapy settings.(4, 5, 9, 56-58, 125) The topic of peer connection was broadly scoped in the literature before interviews during 2014–2015, searching domains of: learning groups, GP wellbeing, supervision, burnout, empathy, resilience, isolation and the search terms identified in Appendix Six. Consistent with the research design, the interviews were conducted in a semi-structured format to both guide but also remain open to the participants' responses. The interview questions were designed to explore, describe and interpret the participant GPs' perspectives on peer connection.(241) The theoretical frameworks of constructivism, Rogerian psychodynamic theory and pragmatism helped to inform and guide the interview guide. These ideas were developed in an iterative process with two GP supervisors, LC and JC, and pilot-tested on two GPs known to the researcher. Piloting and testing helped to ensure that the questions were intelligible and appropriate to the research questions and design, but these interviews were not included in the analysis.

Following this, a reflexive process continued throughout the interviews themselves with follow-up probing questions as required. A semi-structured approach is appropriate when the researcher is informed enough on the topic to guide the question frame. Semi-structured interviews were used

so as not to miss unknown or novel components of peer connection.(236) The questions early on addressed contextual settings and connection opportunities with peers. The interview began with descriptions of GP practice location, clinic type and peer-connected learning settings, and finished with potentially more thoughtful questions on the typology of relationships, including varying depths of GP-to-GP connections, and potential for effects on wellbeing, empathy, resilience and burnout. These latter questions exploring the role of peer connection in the participants working lives. A beginning and an ending question clarified the GP participants' thoughts about the definition of peer connection.   Probes were suggested depending upon the participants responses and in keeping with the conversational style allowing flexibility and focus.

After the first interview, a repeated follow-up question regarding the concept of peer connection was added to the interview questions after review with my supervisors. This was because the process of the interview itself was possibly a form of peer connection. It was thought that the language that surrounded this emergent concept might be better developed by the end of the interview. This was felt to be a form of in-interview reflection and consistency testing to encapsulate a maturing concept that the participant may not initially have had the language to describe. This was reflected by the literature and particularly the finding of Beckman that beneficial collegial relationships were surprising to participants with respect to the intensity of feeling and benefit.(5) The interview duration ranged from 35 to 83 minutes, with an average duration of around 60 minutes. Data collection followed a similar procedure for each group.

4.4.3 Field notes, emotionality and reflexivity

Field notes were made immediately after each interview. To bring continuity and emotional tone to the data analysis, I included the field note reflections at the head of each of the transcripts, which anchored and reminded me more deeply of the interview and of the participant. Each time I coded and read and reread the transcripts, I reflected upon the setting and the interview itself. The interpreted emotionality of the questions and reflexive thoughts were recorded in the field notes based on verbal/nonverbal cues from the participants. Field notes included the researcher's reflections on how the interview went, feelings from researcher and participant, transference, comfort, verbal and nonverbal cues, perceived importance and relevance to research questions,

data sameness or newness, confirming or disconfirming and confounding. This included reflections on how a participant's practice type could have influenced their responses and how their social standing may have influenced responses, for instance whether they were single or married to another clinician, and how much the participants' levels of insight, reflexivity and emotional literacy contributed to their description, understanding and perceived value of peer connection. This included an allowance for noticing any nonverbal signals such as hand gestures and pauses when trying to find vocabulary or when there was uncomfortable silence or any kind of observed emotion. This participant insight was captured in the field notes and contributed to the analysis.

Field notes were handwritten immediately post the interview for the first three interviews, but the other participants, 4 to 29, were immediately audio-recorded on audio equipment. (The audio equipment detailed in the data management section to follow). This method I personally found helpful immediately after the interview as talking into a recorder rather than handwriting field notes captured the field better. Voice recording of my own reflections allowed more flow in consciousness compared to the slower writing of my observations. Later the field notes were all transcribed into Word documents and imported into NVivo 11. Throughout the project, the field notes for both samples have been used to revisit and reflect upon in an iterative fashion.

4.5.0 DATA MANAGEMENT

4.5.1 Organisation of the data

The organisation of the data was the same for both interview groups. All identifying material was removed from all documents immediately post interview and stored securely. Coded labels were assigned to anonymise the participants in preparation for analysis.

The first two interviews were hand-transcribed by the researcher into a separate Word document. The field notes associated with the interviews and audio-recorded were also hand-transcribed by the researcher. All audio transcripts were uploaded to a computer as MP3 files and checked for clarity on the recording. For recording, a standard recording instrument was used. The returned transcripts were imported into NVivo 12 along with the audio files and field notes. With the exception of the first two interviews, all other interviews were sent off via Dropbox to a

transcriptionist.(252) The transcription service is regularly used by Monash University researchers and a confidentiality clause was signed by the company.

When the transcribed interviews as Word documents were returned and checked, they were uploaded into the same password-protected location as the first two transcripts. Backups were managed to Monash University's encrypted Google Drive and to a locked hard drive stored separately. All Word documents transcripts, field notes and audio files were uploaded into NVivo 10. NVivo is a qualitative data analysis software tool. During the thesis study, NVivo10 was upgraded to NVivo11 and then NVivo12.

4.5.2 Ending recruitment and data collection

The commonly used term "theoretical saturation" was argued by Guest to be best applied to grounded theory research and Guest argued the concept of saturation is:

> the point in data collection and analysis when new information produces little or no change to the codebook.(253)

Notably this research was not codebook thematic analysis, but reflexive thematic analysis. In this thesis study, data redundancy or repetition was defined as when the data yielded few new insights and further interviews seem to add nothing new. In the confirming group interviews, repetition in the data occurred around participant 15. However, I was still to interview some rural and remote participants, and so continued until these were included. In the disconfirming group, I was searching for disconfirming voices; however, there was more similarity than difference noted. There was more richness and depth, with some refining of ideas rather than significant new insights from the disconfirming group of participants. No significant new insights were gained after eight participants in the disconfirming group. It seemed that despite being nominated as uninterested, this allegedly disconfirming group generated individual nuances rather than major group differences. This will be further explored in the results section. However, this reflexive work with the interview process helped to explain the two sample sizes. Thus, data redundancy and repetition occurred with 29 interviews.

4.5.3 Final data corpus collected for analysis.

The process of analysis was assisted by the coherence and organisation of the data corpus. The final data corpus consisted of 29 transcripts, 29 field notes, thematic maps, reflexive annotations and notes within the transcripts, as well as a PhD reflexive personal journal.

4.6.0 DATA ANALYSIS

4.6.1 Coding review and reflexive research

At the end of the first-level coding of interviews from the confirming group participants, I did some reflexive work with three colleagues who independently coded a sub set of the data. These were colleagues from my academic department; one was my supervisor and two were fellow PhD students. They each coded some of the interviews separately and results were compared with the researcher's free codes. There was peer discussion and reframing of participant meanings both at a coded level and with the whole story of the transcript. As a reflexive process, the often-painful iterative circularity was helpful for continued immersion and checking of researcher comprehension. Two of these colleagues were non-clinicians, which provided a fresh and unique position that both challenged and brought clarity to many of my intrinsically held assumptions from a lifetime of working as a GP. Reassuringly, whilst different words were used to label codes, there was much overlap in meanings derived. These differences in language and understanding were checked and discussed to understand both semantic and latent meanings of the language. Consistent with reflexive thematic analysis, no concordance ratings were used as this was a reflexive process.(212)

4.6.2 Using coding trees and mind-mapping

An example of a coding tree is given in Figure 4.1. This is an example of the domain summary of an early descriptive-level theme called "enablers of peer connection" in which I interpreted the developing sub-theme of "heart-lines". The figure shows the developing coding tree, which was at the stage illustrated an unfinished theme. Further examples of coding trees are included in

Appendix Seven. The coding trees were derived after hand-drawn mind-mapping of concepts and ideas, as well as through exploring NVivo 12 word clouds and diagrams.

FREE CODES	SECOND LEVEL CODE	EXAMPLE
Benchmarking		**Meili Participant 16**
Distress	*(eventually Heart-lines)*	
Values		*I think it's reflective. I suppose it*
Deeper peer learning		*has its place in having a*
Case based learning		*reflective role, so being a mirror*
Clinical learning		*for the way you're doing*
Psycho-social knowledge		*something in looking at am I*
Social and emotional learning	*(eventually Heart-lines)*	*doing it right or wrong or how can*
The debrief		*I be doing it differently. It's a*
The witness (understanding)		*support system, so for clinical*
Vocational learning- education		*knowledge, but I suppose also,*
Everyday GP Peer learning		*as we've done, it's that emotional*
Advocacy and political domains		*part as well, stuff that you can't*
Business Skills		*get from people who aren't GPs*
Consulting Skills	**Enablers of**	*sometimes. So it has a reflective*
Just in Time learning	**Peer connection**	*role and probably actually those*
Informal	**in the workplace**	*two things: the reflective role*
Curriculum		*and the supportive role. Both of*
Networks		*them probably have a clinical*
Non GP Relationships		*context in terms of knowledge*
Allied staff as peers		*and the way I practice, but also*
Medical marriages or		*probably that deeper emotional*
family at home		*kind of, "How am I actually*
Relationships others		*going? Am I going okay? What*
Peer Connection		*am I doing to look after myself?*
Desire for		*What am I doing to make sure I*
Need for	*(eventually Heart-lines)*	*don't burn out?" It does it in a*
Value of		*supportive way in that I have*
Peer Relationship qualities		*people that I chat to -to recharge*
Peer validation	*(eventually Heart-lines)*	*my emotional battery, to give me*
Sharing and peer reciprocity		*the knowledge that I need that I*
Team work		*might not have.*
Trust		
Two minds observer stance		
Peer Relationship Types		
As a resource		
As a safe place	*(eventually Heart-lines)*	
As collegues		
As critics		
As family	*(eventually Heart-lines)*	
Diversity of		
Role model informal mentor		
As friends	*(eventually Heart-lines)*	

Figure 4.1. Preliminary descriptive coding tree for "enablers of peer connection"

Eventually the codes were collated and placed onto colour-coordinated sticky notes on a large whiteboard and much time was spent interrogating myself and the whole data visualisation in a reflexive process. This meta-visualisation was helpful with the additional assistance of the immersion of the coding, the hand-drawn mind-mapping and the software NVivo functions

including word clouds. The codes developed into themes after a process of reviewing domain summaries and the interpretation grew more sophisticated as the analysis progressed.

4.7.0 CODING METHOD

The approach to coding followed tenets of thematic analysis as described by Braun and Clarke.(214, 238) They emphasised their method is not a cookbook approach but an iterative, messy, interpretive and reflexive analysis that involves going back and forth between the data sources, the literature, the theory and the interpretation multiple times.(212, 214, 238, 239)

The method was applied to the data from the first interview and coding with field notes, comments and notes made. Following steps is not the method of reflexive thematic analysis. (212, 254) Graphical representations in NVivo software and hand drawn mind maps progressed in a messy nonlinear revisionary path. All the while I was cognisant of the need to review once the data corpus was complete. Preliminary codes were examined and tested reflexively for coherence with separations and meshing up into other categories as discussion and reflection progressed. Many word clouds were used some successfully and others not, to see if what I was hearing in the data was supported by the visualisation of the data. I was cognisant of what is not heard or said in the data, is often important and was very careful to have a reliance on quantifying comments, as this was a highly reflexive, and deeply immersive interpretive process. The emotional coding was especially helpful to clarify what was assumed to be important to the participants based on non-verbal cues. This development is illustrated in Appendix 8, pages 341-3, Table A8.1, 8.2 and 8.3. Further to this appendix, generative ideas of themes as they related to the data and integrating emotion, themes and theory as in Figure A8.2, page 343, assisted with the deepening analysis. Following this and many discussions with peers and supervisors, a white board and coloured note papers were developed and the whole of data corpus visualised and interrogated.   Ideas and final themes were interrogated for their 'stand-aloneness' and for the entirety and coherence of the story of the data as a whole. The themes stood apart but were equally joined together in a story. The summary here is expanded in the next sections with more linearity than the arrangement suggests.

<u>A reflexive note on grounded theory and constant comparison methods.</u>

Grounded theory constant comparison method as discussed in section 3.3.2 may be considered further here, particularly as after the first recruitment a second recruitment reflexively followed. The data was not compared as per Glaser method interview by interview with developed analysis after each interview but thematically organised and analysed as a whole. This is a key defining and separation of methods between grounded theory constant comparison and reflexive thematic analysis, as originally articulated by Glaser: "while coding an incident for a category, compare it with the previous incidents coded in the same category."(255)

In this reflexive thematic method, analysis occurred after recruitment and coding with limited whole corpus analysis and the second recruitment incorporated into the whole data corpus. This allowed the one concept to be viewed wholly from two potential viewpoints, rather than twenty-nine individual viewpoints. In the approach to this decision a broad conceptual shape of peer connection was needed, rather than a comparison to a concept that had yet to be clarified or empirically confirmed. It wasn't obvious at the beginning of the exploratory research that a theory would be the result of the project, and grounded theory is designed best to articulate theory. (255) As noted in the ensuing chapters, it may be that constant comparison grounded theory will assist with further research on this concept. Thematic analysis allowed for some flexibility as has been described in the previous paragraph. One of the critical differences between the two methods is that as a method is described by Braun and Clarke as: "we note that the emphasis in TA is on themes, patterns of meaning across cases, rather than on meaning within individual cases." (254) Reflexive thematic analysis was a deeply considered method where the researcher needed to respond to the data in potentially unknown ways but within a framework of theory, experience and subjective understandings.(254)

Reflexive Thematic Analysis.

This procedure is illustrated in Figure 4.2 and consists of:

Step one: data familiarisation
Step two: generating the initial codes
Step three: searching for themes
Step four: reviewing themes
Step five: defining and naming themes
Step six: producing the report (findings chapters)(238)

Figure 4.2. Data analysis illustrated

4.7.1 Data familiarisation

Data familiarisation began from the first interview. The recordings were listened to in conjunction with re-reading the field notes and journal writings. To bring continuity and emotional perspective to the data analysis, I included the field-note reflections at the head of each of the audio-transcribed transcripts and reread the interviews many times. In accordance with reflexive analysis, I was conscious of staying close to the data and not forming premature interpretations.

For example, in the very first interview participant AAMV (F age 54) described her peer connection with the nursing staff at her workplace, with whom she worked closely. I could feel my resistance to considering this as a significant item to code. I remember being impatient to some extent during the interview and wanting to "get to" the GP peer-connection part. Even during this interview, I can recall slowing down my impatience, recognising my reflexive error and including this as a collectively named code called "allied staff as peers and relationships" when I began to code at the first level.

Addressing my own role within the research was as important as immersing myself in the data and familiarising myself with the entire process. The recordings were listened to three times in entirety and revisited in parts many times. The transcripts were under constant interrogation.

4.7.2 Generating initial codes: semantic and latent coding

The total free code count was 84 at the end of coding of the 29 transcripts. I used a reflexive analysis similar to Braun and Clarke's description of initial coding during thematic analysis. This involved a mix of descriptive (semantic) and interpretive (latent) coding.(214) At this first level of coding, additional reflexive annotations were made in NVivo. Many thematic maps were drawn by hand throughout the process to aid in the development of the coding and deepen analytic and reflective processes.

These first-level codes were deliberately kept close to the participants' words; for example, participants were asked about the "type" of peer connections or "different levels" of peer connections they might describe. I would free code exactly as they used the words. So the code was "teamwork" if they used the descriptor "team". However, some latent interpretive codes were developed such as "two-minds observer stance" as I interpreted this to be a peer-connected reflective experience. For instance, I noted that participants frequently discussed reflective experiences with the as-if component described in the literature by Rogers – that they were their own observer (two-minds observer stance).(49) Similarly, there was a mix of descriptive (semantic) and interpreted (latent) meanings in the code labelled "trust". Sometimes participants used this word and sometimes I interpreted it from the interview. These free codes were bundled during the first-level coding under the main code heading of "peer relationship qualities". Thus, I developed a coding tree with sub-codes as I went along. At this early stage, codes could hold full or partial meanings available only to the researcher and could be modified during coding, as the examples above illustrate.

4.7.3 Early searching for themes

Searching for themes began at the end of coding of the initial 21 interviews from the confirming group. From the first few interviews, I was reflecting upon the transcripts of participants and began noticing similarities and differences. As an example, I began to notice clustering around gaining access to peer connection. I used a second level of coding to broadly separate all codes into three domains; this is a stage of coding that is called developing domain summaries. At this stage, three domain summaries could be described:

1)   Intra-personal issues (within the psyche of the GP)
2)   Inter-personal social issues (relating to intersubjective relations)
3)   Workplace context (including political-cultural issues)

Each domain was separated into barriers and enablers of peer connection, to give a total of six broad domains. This helped to reduce the 84 free codes to six largely semantic buckets of descriptive domain summary codes. This helped to see the different issues, layers and influences of experience that had occurred in peer-connected relationships.

It did seem to be at this stage of coding that there were three parts to the story of peer connection. For instance, a cluster of meaning occurred initially called "access to peer-connected experiences" which was later renamed from the "access" theme to the preliminary theme "GP seeking: GP problem-solving and the necessary 'others'". This clumsily named preliminary theme became the finally named "navigating the resource of peer relationships". This is illustrated in Figure 4.3 and presented as an example of a final theme having contextual clusters as sub-themes but which were still part of the whole.
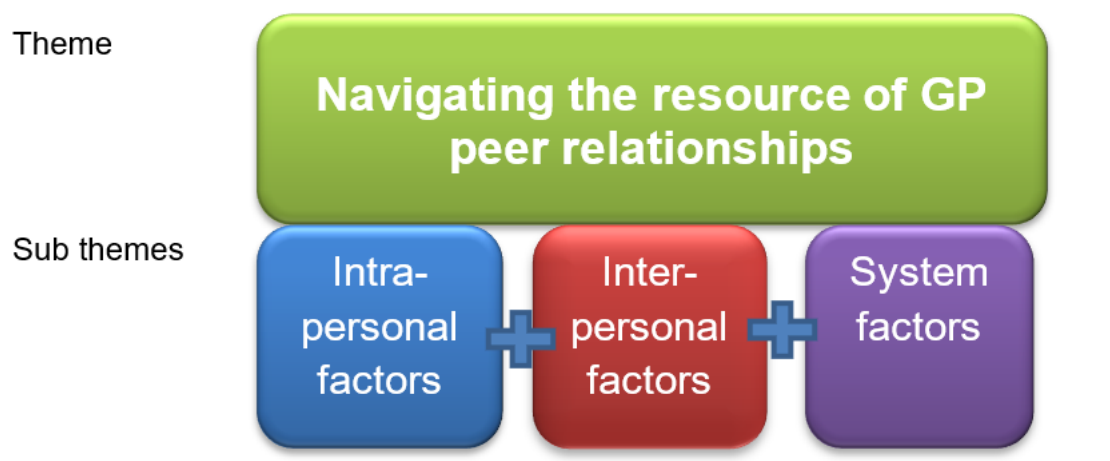
Figure 4.3. Theme 1 structure example

The process followed is shown as an example but was anything but linear and required iterations of mind-mapping and deep reflexive interpretive work. There were many successful and unsuccessful maps as I explored and immersed myself in the data, and some of these are provided in Appendix Eight.

Next, I noticed the simply described "peer-connected experiences" were clustered around what had been named superficial and deep knowledge requirements. These knowledge requirements evolved and occurred within certain activities of peer-connected experiences. With the additional insights from the emotional (tone) coding (see Appendix Eight, Tables A8.1–3.), I interpreted these clusters as being either clinical-cognitive work-based needs or affective-social-emotional work-based needs.

Furthermore, many participants identified an individual GP they would *not* seek for peer connection. This was defined as a separate code named the "other guy". The "other guy" code was when there was deliberate avoidance of peer connection either from the participant towards another or by the participant themselves for various reasons. On reflection, even writing now, it may have been more politically correct to call this simply othering.

The following is an example of the interpretive work involved in early searching for themes. Three preliminary sub-themes (clinical-cognitive work-based needs, affective-social-emotional work-based needs and the "other guy") were renamed "mind-lines", "heart-lines" and the descriptively named "GPs outside the line" collection, respectively. These three preliminary themes were finally

collated into a single whole theme named "the dialogic of GP peer connections" then renamed to a more understandable "inside the peer-connected hive mind and the GP dialogues". It was difficult to describe the intersubjectivity of this second part of the data story, but this was the work of the GP-to-GP therapeutic alliance. This was a stage of naming and renaming and deciding what was a whole theme or sub-theme, as discussed for reflexive thematic analytic methods.(214)

As a final example of searching for themes, a third and final cluster of meaning was the consequences of, and satisfaction with, peer connection. This third cluster of meaning became a theme initially called only "sustainability", which eventually changed to "resourceful self-efficacy as a sustaining practice and as the good GP". This last cluster of meanings was the most interpreted of the themes as it had fewer descriptive components. It was viewed through the pragmatic lens of the research. All the themes have been named and renamed several times. This involved checking coherence, going iteratively through the transcripts and first and second levels of codes, and interpreting through the theoretical position of the research.

4.7.4 Reviewing themes

In this part of the analysis, the sticky notes, mind maps and coding trees delivered a three-part story. The next part of the analysis consisted of interrogating that story to make sure the themes worked well independently and together, and that the names were understandable and consistent with the participants' stories, the theory and the background literature.

Part of the methods included being analytically open and I provide next an example of that reflexivity which is part of the methods of reflexive thematic analysis. For instance, within the interviews, I recognised similarity of certain concepts in the literature around: 1) surprise at the intensity of the value of peer relationships; 2) theories of learning; 3) relationships; 4) burnout; and 5) resilience. I asked myself questions such as "What are they saying?", "What is not being said?", "What do I remember the strongest emotion was for?", "Is that important?'', "Do all those codes fit in there?", "Is the theme too big?", "Does this theme fit somewhere else?", "Is there another name for this theme?", "Is this a domain summary or a fully realised theme?" and "What is the overall story?" This method is consistent with a critical and analytical approach to data using thematic analysis.(214) In this part of the developing analysis, I looked at the process of peer connection as

a story that described how the themes fitted together and thus, via the reflexive analytical methods, began to describe what peer connection is and how it works in practice.

4.7.5 Theme-making: putting it all together

There were broad technical concepts of the analysis that the thematic development required. Braun and Clarke conceptualised a theme as a standalone central organising concept that unites a cluster of codes.(233) Relationships between themes can be hierarchical or non-hierarchical or lateral, and the same for potential sub-themes.(207) An overarching theme may contain no codes and be able to tell the whole story of the data or it may not be present at all, being very dependent upon interpretation of the data.(207) The big picture is able to unify the ideas and concepts, and it is important that the name of a theme clearly fits the meaning and the experience it is representing to prevent the theme being underdeveloped.(256)

In this context, thematic mapping helped to organise the central organising concepts and to explore the relationships between themes. Mindful of questions regarding conceptual clarity and the role of peer connection, I developed various iterations of these maps. Further, I knew the Rogerian framework had informed the analysis and was a large part of one research question. So elements of the Rogerian framework were seen as confirmatory or not within the participant descriptions of the peer relationships and connections they developed.

With the developing theme-making, a story was becoming salient that stretched across the data. The first part of the story consisted of GPs having to navigate numerous issues at many levels, (intrapersonal, interpersonal and systemic), to find and discover opportunities for peer connection. Next was the middle part of the story. The GPs were now within a peer-connected space and were working through work-related matters ranging from superficial to deep issues using different amounts of relational connections. The consequences and third part of this story was that the peer-connected work enabled a variety of self- and career-sustaining practices that encompassed the intrapersonal to the plainly pragmatic needs of the participants. These finally developing themes were hanging together as a story, giving shape to the concept of peer connection and yet remaining distinct from each other.

4.7.6 Management of disconfirming group data

Transcripts of interviews from participants in the disconfirming group were coded independently in 2018–2019. Some new coding categories were clearly identified from this disconfirming sample. The transcripts, however, contained many more codes that were in common with the confirming group. At the end of this second tranche of coding, the new categories were checked against the coding categories from the confirming group. A process of recoding occurred across both groups to arrive at a final coding framework. The final steps (step three to step six) of thematic analysis did not proceed until the codes from the disconfirming group had been added to the initial confirming group codes. This ensured that the themes were not developed until all elements of the story of peer connection were captured.

The disconfirming group interview transcripts followed the same procedures as for the confirming group, with the whole coding frame enlarged and enhanced by new codes that developed within this dataset. These codes were annotated as P2 within NVivo to mark them as the disconfirming group. This labelling of P2 nodes helped to track these meanings through the data corpus. Following this coding, a search was made by recoding the confirming group with attention given to the new P2 codes. For instance, there was a P2 "parallel support" code which only occurred in the disconfirming group as a novel and different code, whereas a P2 code called "fresh eyes" was reviewed against the confirming group transcripts and found to exist there. Eventually "fresh eyes" as both a semantic (some participants used this name) and a latent code (often called something else by others and interpreted to be a similar process of peer review) was rolled into the mind-lines early preliminary theme.

There were only two codes found exclusively within the disconfirming group of participants that were not present in the initial confirming group of participants. These were "parallel support" and "illness". The second recoding and analysis proceeded after the first codes were developed into domain summary themes, but before the overall thematic development of the whole data corpus. This method of confirming and disconfirming group comparisons and analysing the data as a whole is well described in qualitative design and reflexive thematic analysis.(212, 214, 232)

4.8.0 REFLEXIVE VALIDITY OF APPROACH

Qualitative research has developed a form of validity testing, with various authors contributing to the ongoing and necessary discussion of rigour.(244, 257-259) Each author described a schematic for the analysis of standards: Malterud described section by section the necessary requirements with a total list of 30 questions; Tong et al. developed the Consolidated Criteria for Reporting Qualitative research, (COREQ) checklist comprised of three domains with a total of 32 items; Cohen and Crabtree used seven main criteria; and Kuper et. al. used six critical appraisal questions.(244, 257-259) Most recently, Braun and Clarke and the American Psychological Association issued further guidelines for evaluation and standards of qualitative research reporting and in particular thematic analysis.(260, 261) All authors progressed through the temporal conduct of the research to address fundamental principles of qualitative reliability as a process. Creswell usefully described:

1) qualitative reliability regarding the researcher's procedures: meaning a consistency of approach across the research body of work
2) qualitative validity: meaning that the researcher conducts ongoing in-project checking for the accuracy of the outcomes.(224)

I utilise these two main headings and collectivise the recommendations. The full COREQ checklist as it applies to this research is located in Appendix Two.

4.8.1 Qualitative reliability and consistency of approach

In this thesis study, ethical considerations and standards were applied to the conduct, the design of the research and the consideration of the participants. This was a prime consideration of Kuper.(258) Malterud specifically suggested that appropriate relevance of the research question includes adequate design and relevant research outcomes.(259) By conducting a gap analysis and by detailed reflexive considerations of my research and clinical background, this was established. Additionally, the process of supervisor dialogue, conference peer presentations and thesis milestones provided oversight of the research design and qualitative reliability, and overall it was a conscious process. Keeping track of qualitative procedures over time is also a part of establishing

reliability. An audit trail is an essential matter in any paradigm of research and this includes the COREQ 32 checklist criteria across the three domains of qualitative procedures:

Domain 1. research team and reflexivity

Domain 2. study design

Domain 3. analysis and findings(244)

As discussed, amongst many others Malterud, Cresswell, Cohen and Tong all spent considerable time emphasising the importance of qualitative procedural methods to the credibility of results.(224, 244, 257, 259, 262) Reflexivity and documentation within the audit trail contribute to qualitative trustworthiness. Reflexive thematic analysis has particular use of reflexivity throughout the project and I believe I have been explicit in this.(261) Utilising author-drawn iterative nine-stage maps, my field diary, coding tree development and interpreted thematic discussion, an "outsider" can follow the reasoning to the outcomes as a reliable process. Using an audit trail is a part of ensuring the dependability of qualitative research.

4.8.2 Qualitative validity and constant accuracy checking

Validity has a broad and sometimes contested definition in qualitative research and the semantics are ongoing from Lincoln and Guba's to more contemporary work.(224, 245, 257, 259, 262, 263) However, Cypress used the terms "well-grounded, relevant, meaningful, logical, and confirming" as accepted principles amongst many others.(263) Cresswell recommended using a number of strategies as follows and incorporating them into the design as primary strategies.(224)

1. Triangulation
2. Member checking
3. Rich and thick description
4. Reflexivity
5. Disconfirming or divergent data
6. Prolonged time in the field
7. Peer debriefing and external audit

<u>Triangulation</u>: Qualitative triangulation means using more than one data source to create themes.(224, 262) The data sources used for this research were the interviews with reflections from, field notes and emotional coding, as well as multiple theoretical lenses, researcher experience and available literature. Finally, triangulation included actively seeking a second disconfirming sample in the research. The design not only looked for those who were attracted by the research topic and had some intuitive understanding, but actively looked for those who were not necessarily participating in peer connection to the same extent. This was a way of radically shifting the lived experience lens and contrasting the meanings and constructs particularly useful in constructivist approaches.(262) This also provided some degree of limitation as these participants were not so easily found nor responsive to request for interview. The subsequently rich and thick description of peer connection in the findings can, via exquisite detail and multiple lenses, explain the results in a realistic manner.

<u>Member checking</u>: The findings were not formally member-checked with the GP participants.

<u>Rich and thick description</u>: The research design was specifically designed to provide depth and add richness to the concept of peer connection. One of the key objectives of the thesis is to progress the understanding of peer connection with some degree of clarity. This has involved giving the multiple convergent and divergent voices equal credibility whilst reflexively noting perhaps more muted voices.(264) By using qualitative procedures appropriately in multiple settings, a dependable account of the topic has been achieved.

<u>Reflexivity</u>: The COREQ checklist has "research team and reflexivity" as the first domain to assess qualitative standards, whereas Cohen called this "addressing researcher bias" and Malterud simply "reflexivity".(244, 257, 259) The approach to reflexivity has been discussed with an introduction to the insider–outsider positions of the clinician researcher as well as being interleaved throughout the methodology and the methods chapters. As an undeniable participant within the research, I consider this is simultaneously an advantage in a quasi-ethnographic appreciation of the lived experience and empathic understanding as well as a disadvantage in being unable to always be distant and remain an observer. The entire method of this thesis study is based upon reflexive thematic analysis.(207, 212, 214) This rich layering and reflexive dance, as I refer to it, were

acknowledged and accounted for within the research design. My own world and bias were explicitly stated.(224) Thematic analysis rather than ethnography, phenomenology or grounded theory was the preferred technique for this reason. The multiple lenses of theory add to the project. The reflexive method which is interleaved throughout allows the reader to interpret further the contributions of the researcher and the participants, as a fundamental paradigm of qualitative research.(212, 258) No doubt the reader will have reflexivity of their own.

Disconfirming or divergent data: This has been addressed by actively reviewing the themes and iteratively changing the design. The second round of interviews was designed to include the missing voices of those GPs who did not participate to the same extent in peer-connected activities as did the original sample in phase one.(224) This data was actively searched for by recruitment methods and within the participants' transcripts.

Prolonged time in the field: As a clinician who was also a PhD thesis researcher, this was a given as I have experienced a lifetime in GP work. That is, I had immersion in the field of the participant's world. This thesis research occurred over a long part-time course, interrupted with time off due to the Covid-19 Pandemic and a national leadership role giving the researcher plenty of time to reflect whilst in the field of research. As stated throughout the thesis, this required a dance of reflexivity. This, of course, raises questions of benefits and other considerations within the research. There is considerable overlap within the triangulation and reflexive approaches here to validity.

Peer debriefing and external audit: These occurred in many ways, beginning with useful questioning of supervisors. Auditing occurred when changing supervisors, where my whole project needed summarising and explaining to new academics. I found this review invaluable. Occurring just before mid-candidature, this can also be characterised as a form of external audit, as were the committees for the thesis milestones. As a procedural matter, co-rater interpretations, with supervisors, with GPs from within the clinical field and with those co-raters outside the field, provided credible multi-positional peer review. These additional checks add to the trustworthiness of the findings.(224, 259) Both formal and informal peer debriefing occurred throughout the project due to my privileged position within the field.

4.9.0 ETHICAL PROCEDURES

Ethics approval was first granted on 1 June 2015 (CF15/1761-2015) by the Monash University Human Research Ethics Committee (MUHREC). Amendments were made to the title in 2016. A change of supervisors occurred in 2018 and an amendment to accommodate additional recruitment by snowball sampling in 2018. The ethics timeline and ethics explanatory statement are in Appendix Nine.

Data management ethical procedures were discussed with data experts at Monash University. Considerations of power, influence and participant-researcher safety have been explicated through reflexive discourse in the thesis but were also discussed in a detailed ethics application.

4.10.0 CONCLUSION

The methods were deeply thought about and revisited iteratively within this project. This is part of a deeply immersive qualitative and reflexive approach.

Chapter Four in review

Qualitative exploratory research design

Iterative and reflexive methods

Recruitment procedures

Confirming and then disconfirming sample strategy

Data management of whole data transcripts

Reflexive thematic analysis procedures

Reflexive validity of approach

Ethical approval and amendments

CHAPTER FIVE: RESULTS AND PARTICIPANTS

This chapter consists of the sample description which then leads onto the story of the data in three parts. The three parts of the story have the beginning, which describes the participants navigating the resource of GP peer relationships in a complex to and fro of enabling and disabling practices. The middle of the story is where peer connection is enacted and performed and this part of the story is called being inside the peer-connected hive mind and the GP dialogues. The final part of the participants story is the result of the peer connected experience and is described as resourceful self-efficacy as a sustaining practice and the good GP. The result of the peer connected experience is that the GP participants felt they had enough resources to make them identify as a good GP, which in turn created self-efficacy and a belief that they could keep on with their practice. They could stay working.

5.1.0 INTRODUCTION

Note that the entire story of the data addresses the research questions through understanding the concept of peer connection and the challenges in enabling its existence, as well as its dynamic dialogue, roles, functions and consequences. This chapter describes the participants' demographics and gives an introduction to the overview of the themes. This is followed by a detailed story of each theme and its subthemes.

5.2.0 THE SAMPLE: WHO CONTRIBUTED TO THE RESEARCH

This section describes the sample and demographics as part of the findings. Then I illustrate the themes individually in more depth substantiating their boundaries, clusters and nuances. Textual quotes included have line numbers from the transcripts for reference if required. All participant quotes have been set off as block quotes to indicate and highlight their presence.

5.2.1 Introduction to the participants

I refer to confirming and disconfirming groups accordingly, but some figures are still representative of the analytical work with additional preliminary labels and codes rather than the final labels. I

have illustrated some maps and tables as they are representative of the developing work which helped to generate the results (Appendix Eight). All identifying details for the participants were kept separate in accordance with the ethical management of research data.

The confirming sample for information-rich peer-connected experiences had a prefixed code AA. The disconfirming sample for disconfirming peer-connected experiences had a prefixed code BB. Each participant had a computer-generated randomly assigned two-letter initial added to the group label, thus completing a four-character anonymised ID for each participant. For example, AAMV is a GP from the confirming sample and BBUF is a GP from the disconfirming sample. Table 5.1 is a summary of participant demographics thought to be helpful for the discussion within this chapter. A text-based summary of participants follows Table 5.1 and Table 5.2

Appendix five shows a redacted table. More demographic information was collected than shown and the reason for this was to understand better the home demands and personal support that some of the participants may or may not have had outside their workplace.   To include this further may identify participants and thus the information was removed and stored in accordance with ethical principles of data management. This comment is included to demonstrate the reflexive and thoughtful treatment of participants and the data collected which had purpose in its collection..

Table 5.1. Summary demographics of the sample.

Participant code	Graduate Australia or international (IMG)	Gender as described	Age	Location	Usual work sessions per wk (1 session = 3–4 hours)
AAMV	IMG	F	54	Victoria Inner metro	5
AACG	IMG	M	55	Victoria Inner metro	7
AAWM	Australia	M	40	Victoria Inner metro	7
AABJ	Australia	F	57	Victoria Inner metro	7
AAOK	IMG	F	35	Victoria Inner metro	8
AAYU	Australia	M	62	Victoria Rural	8+
AAH2	Australia	F	52	Victoria Inner metro	5
AAVX	Australia	F	38	Victoria Outer metro	6
AAXW	Australia	F	47	Victoria Outer metro	6
AAFM	Australia	M	58	Victoria Outer metro	9
AAC5	Australia	F	34	NSW Regional	2
AAWA	Australia	F	38	NSW Inner metro	6
AAOO	IMG	F	39	QLD outer metro	6
AA6X	Australia	F	39	QLD Inner metro	7
AAO8	Australia	F	39	WA Outer metro	6
AARL	Australia	M	54	QLD Outer metro	7
AACC	Australia	M	63	SA Inner metro	6
AAS7	Australia	M	39	QLD Regional	11
AAVA	Australia	M	54	Victoria Regional	6
AAD2	Australia	F	51	Victoria Outer Metro	4
AAE6	Australia	M	37	SA Remote	10
BBJE	Australia	F	41	Victoria Inner metro	6
BBRZ	Australia	F	41	Victoria Outer metro	5
BBGB	Australia	F	51	Victoria Outer metro	5
BBUF	Australia	M	59	Victoria Inner metro	9.5
BBSB	Australia	M	61	Victoria Inner metro	12
BBXN	Australia	F	60	Victoria Inner metro	8
BBAE	IMG	M	61	Victoria Inner metro	10
BBGQ	Australia	M	65	Victoria Outer metro	10

Table 5.2 lists the sources that the confirming group were identified from for recruitment.

Table 5.2. Sources of recruitment purposive confirming group.

Source and date AA participants	No. responses	Accepted for interview	Declined interview with reason
Victorian RACGP e-newsletter 22/06/2016	4	2	X1 at data saturation X1 no response
Balint Society of Australia and New Zealand e-newsletter June–July 2016	3	2	X1 GP as data saturation had been achieved at 21 interviews
Social media Twitter account @brookmanknight 22/06/2016 and 06/07/2016	3	1	X1 ineligible due to less than 5 years in unsupervised practice. X1 could not coordinate their travel and my availability in rural/outer regional area.
GPDU* Posted advertisement on 06/07/2016 *closed Facebook forum for Australian and NZ GPs Member numbers n=5800 members at the time	22	13	X4 ineligible due to less than 5 years in unsupervised practice. x2 (#12 and #14 were discovered to be ineligible during an abbreviated interview) x2 could not coordinate time on Skype or in person. x1 had holidays when I was visiting the outback rural region for face-to-face interviews.
Conferences RACGP16 Perth 30/09/2016	1	1	0
Convenience 29/06/2016	2	2	0
Large group practices known to participate in peer group learning	0	N/A	N/A
Totals	35 GPs	21 interviews	14 non-participants

There were 35 responses to the initial recruitment drive which yielded a final set of 21 interviewees (see Table 5.2). Non-participants included 14 GPs who were either ineligible or had difficulty with scheduling a time to participate in an interview. Of the 14 non-participants, 7 were ineligible due to having less than five years of independent practice. Two of these were interviewed in error which was discovered during an abbreviated interview as despite their age they were within five years of fellowship. Four non-participants were rural and were eligible but had difficulty with scheduling and three further non-participants were not needed after achieving data repetition. The confirming group consisted of 9 males and 12 females from five states of Australia including remote, rural, regional and metropolitan regions.

In the disconfirming group responses, 10 GPs were approached for interview. Eight GPs agreed to participate in the second round of interviews. There were two participants sourced from my

networks, who both declined. This smaller size for the disconfirming group was felt to be reasonable given the constraints mentioned re budget and resources. In the disconfirming group there were two GPs who declined to participate. They were both solo practitioners in Victorian metropolitan practice. These GPs declined to be interviewed after hearing about the study. They were both male and both suggested they were not "typical" GPs.

5.2.2 Summary description of participants

The participants were all practising GPs within the Australian general practice context. They were all post fellowship, so not undergoing any training at the time of interview. They had at least five years of independent practice within the Australian context, to minimise any issues relating to recent immigration or examination stress. They were from five states, with a broad age range, only male (45%) and female (55%) nominated genders, from remote rural and metropolitan practice, and most were married but some were single or widowed. Many but not all had children, some were practice owners, and some were international medical graduates, (17%), with some of those having English as a second language. They were geographically described as being in metropolitan practice (83%) and rural practice (17%) which included regional and remote locations. They were all in group practices with no solo practitioners. Full additional demographic information included in Appendix Five (Tables A5.1 and A5.2).

At all times the heterogeneity of practice size, location and GP characteristics was considered. There were more idiosyncratic similarities and differences, rather than any unique cluster of meaning that belonged to a particular demographic. There was some consideration that English as a second language may have influenced vocabulary more than perceptual insight for a couple of participants. There was some reflection by participants that being married to another GP conferred advantages for the experience of peer connection but reduced the appreciation of peer connection. This became a reflection during interviews that the advantage of having a GP domestic partner was taken for granted. This advantage for peer connection did not occur for those who were domestically partnered with a non-GP medical doctor.

The story of the data has an overall temporal flow regarding, firstly, the challenges of getting into a situation for peer connection (navigation theme) and, secondly, experiencing good peer connection (hive mind/dialogic theme) and then, finally, reflections on what peer connection was being used for in relation to GP work (self-efficacy theme). This is consistent with reflexive thematic analysis in that the overall result is a cogently interpreted story with clusters of meaning. Each theme, however, can stand alone also as a cluster of meaning within the overall data story. Some interpretation called latent (interpretive) coding is discussed as is consistent with the research design at the time of interview coding and analysis. Overall, however, interpretation of the research is confined to the discussion, although some of the description of interpretation of the codes/themes is necessary to represent the results.

5.3.1 Theme overview

Note that the entire story of the data addresses the research questions through understanding the concept of peer connection and the challenges in enabling its existence, as well as its dynamic dialogue, roles, functions and consequences. There is an introduction here to the entire story including redundancy and leftover codes. Following the introduction, a full explication of each theme and its collected meanings follows. Each theme is substantiated by data excerpts, which are chunked to provide an illustrative example of the collective meaning of the theme. Chunking allows for contextual data. The data excerpts are formatted in block quotes and identified with the participant's code and the line numbers taken from the transcript. There are contributions and contexts to the themes which are broadly described in the detailed text.

The following diagram Figure 5.1, illustrates the total thematic story including the subthemes and the beginning, middle and end of the story as seen next.

Figure 5.1 Total thematic story including sub themes

Theme one. Navigating to the resource of peer connection

Theme two. The peer connected hive mind and the GP dialogues

Theme three. Resourceful self-efficacy as a sustaining practice and as the good GP

Navigation → **Peer connection** → **Sustainability**

Sub themes

Intrapersonal factors

Interpersonal factors

System factors

Sub themes

Mind lines

Heartlines

Out of line

5.3.2 The beginning of the peer-connection story

Navigating to the resource of GP peer relationships: This theme describes the push and pull factors that enable GPs, or not, to enter a peer-connected relationship. "Navigation" is used to illustrate the myriad factors and the perpetual motion of that process. This theme largely answers the third research question relating to the contexts of general practice. These contexts were factors intrapersonal to each GP, interpersonal factors between GPs and systemic or structural factors. Constructivism, as the overarching theoretical approach, contributed a multifaceted understanding of this theme and the other themes to follow. The implications of the barriers and enablers to

getting into a peer-connected relationship are relevant at structural levels including system, clinic and personal factors relating to the GPs themselves. There is a dynamic nature of the barriers and enablers, as these can vary with the time and other factors, making the relationship of peer connection challenging to enact. In other words, there is an interdependency of factors relating to, for example, time, burnout or value-matching regardless of whether there was leadership role-modelling or a lunchroom etc. Much of this theme addresses the question of how the context within the general practice work environment influences peer connection in the workplace.

5.3.3 The middle of the peer-connection story

Inside the peer-connected hive mind and the GP dialogues: This theme describes the relational intersubjective dialogic spaces of peer connection. There is a combined theoretical approach of pragmatism and Rogerian theory within this theme. There are clusters within this theme around the very pragmatic mind-line component of largely clinical knowledge-sharing. There is another cluster that sits within psychodynamic theory and affect which is a heart-line and relates to affective knowledge-sharing. Finally, there is a cluster of meaning that relates to othering or reflections on GPs who are out of line and rejected. "Hive mind" was a term sourced from the participants and I have used it to indicate the intersubjective space between GP peers. This last cluster of meaning within the hive mind serves to reinforce the peer-connected experience and is an important dialogue of the GP. This theme largely answers the question of how Rogerian theory explains occupational relationships in Australian general practice. However, this theme also contributes some exploration of the role of peer connection within Australian general practice. These roles consist of clinical and affective knowledge management as a workplace knowledge network, as well as identity reinforcement and assisting with sustainability of practice.

5.3.4 The final part of the peer-connection story

Resourceful self-efficacy as a sustaining practice and the good GP: This theme also sits within the theoretical paradigm of the research using pragmatic and psychodynamic theory. This theme describes more of the consequences for the participants regarding their experiences of peer connection. This addresses part of the role of peer-connected relationships. Much of the outcome relates to identity formation and reinforcement. The identity of self-efficacy in the workplace

contributed substantially to sustainability of practice and for some GPs to sustainability of location. By creating and reinforcing a "good GP" identity, this assisted with a feeling of self-efficacy at work and most GP participants described how essential this consequence of peer-connected experiences was for keeping them in general practice environments. This meaning-making and identity work has significant implications for how quality general practice work is approached by regulatory agencies. A cultural review of the role of peer connection contributing to quality general practice as self-reported by these participants would be a worthy area of future health systems research.

5.4.0 IN-FIELD REFLEXIVE CONTRIBUTIONS

Contained within my field notes for the confirming group participants are the first wonderings about whether I was hearing similar thoughts by participant 10. However, at participant 11's interview I noted that my comments were reflective of my feeling "settled" into data collection. I began doing my interstate interviews at this stage also. Between interviews 11 and 17 I noted further that the age of participants here was around 10 years younger than in my earlier interviews. The age shift contributed to me feeling that differences in geographical setting and age of participants warranted further exploration to see if the codes and themes differed or were concordant with the data already collected.

My remaining interviews occurred throughout the RACGP Perth conference of 2016 and I was interested to see if this yielded other differences and allowed me access to a wider range of practice settings by way of practical convenience. Many interstate GPs were meeting at this conference. It was here that I interviewed my oldest participant and recruited another GP who heard about the study via a research flyer and contacted me. My final participant was in remote outback Australia and by this time I was more convinced that I was hearing similar clusterings of meaning regardless of setting, age, demographic or years of experience and that further interviewing would give me only endless nuance. There was a consistency emerging from the data overall with the possibility of no major changes or insights into the phenomenon.(265) Nevertheless, I was very happy to have at least one participant from a very isolated outback setting.

Notably, it was decided mid-thesis that more depth to the subject would benefit from a disconfirming sample. As stated, the disconfirming group of eight GPs added depth and nuance to the results. Yet, given that these participants was nominated by members of the confirming group as disconfirming GPs, this is an interesting result given the data is more similar than different.

I note in an updated paper on thematic analysis research design from Braun and Clarke that sample size discussion for especially reflexive thematic analysis is an 'iterative context dependent decision.' (254) Further the problematising of terms such as data saturation in qualitative data analysis is central and a preference is given to describing knowledge as generative. To respond to these interactive issues a suggestion was made to describe an indicative range and then this be finalised after data collection or early data analysis. This ongoing reflective process is described here to reflect that the temporal process of the research proceeded logically. The final sample size occurring after the indicative range was described so that by reflexively staying close to the data, the research questions, theory and scope, the principles of reflexive thematic analysis were upheld.(212, 254)

5.5.0 THEME 1: NAVIGATING TO THE RESOURCE OF GP PEER RELATIONSHIPS

I first describe the central organising concept of the theme with an illustrative example quote. Following this I use some data excerpts to illustrate the facets of "navigating the resource of GP peer relationships" using the participants' own words.

The first theme, "navigating to the resource of peer relationships", has a feel of descriptive process, but this is discussed later as an interpretable motivation event. How to get "there", to the "knowledge resource" of peer connection, is the primary concern of this theme. Navigating is the beginning of the relationship journey. This is interpreted to be largely motivational and structural, reflecting mostly, but not always, a desire for informal GP workplace knowledge. There are some exceptions to this desire when GP participants described moving away from or rejection of GP peer interaction. The push towards and pull away from being able to access this relational

knowledge-management practice within general practice I have grouped together within the sub-themes as contextual descriptions.

Figure 5.2. Theme 1 components
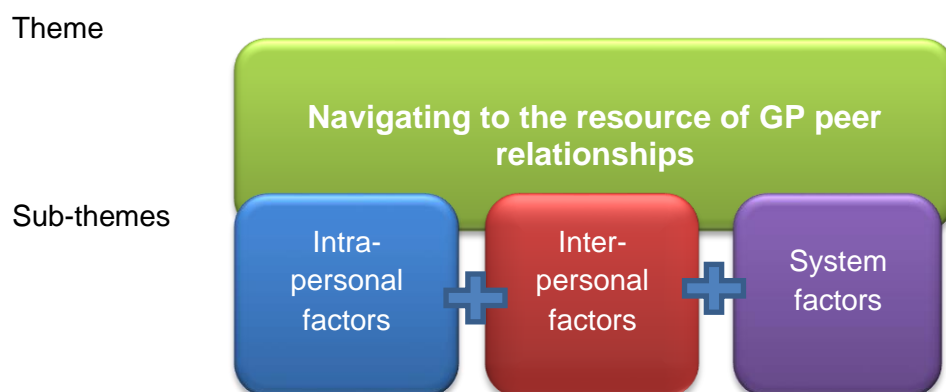
Theme

Sub-themes

The push and pull factors were placed together in each sub-theme as they were not easily separated, whereas the origins of the factors could be easily separated into levels of experience: the intrapersonal, the interpersonal and the structural. There was a lot of context and dynamic relational movement in these sub-themes, which is a part of the story and the reason why, after a few preliminary theme names, the word "navigation" is used. Navigation implies a constant micro-adaptation of steerage within a certain direction and many mini adjustments to the steering wheel even when going in a particular direction.

This theme encapsulates the prerequisite factors for approaching a GP peer for a working relationship. These factors consist descriptively of the push and pull to affiliative peer connection and therefore the ability to access peer-held knowledge. These have been derived from the transcripts' first-level coding with a mix of semantic and latent meaning. The push and pull factors of the prerequisite issues do not occur in a linear manner, so to divide them along such lines seemed incongruent with the story. The factors influencing access to the desired informal network of GP-held knowledge are in a continuous dynamic. They are particular to each context of person, place and time.

This is a large theme, but it creates a story in itself and it was thought better to encapsulate that story in sub-themes for clarity rather than breaking it apart. The deeper meaning is part of the

overall story of peer connection. The "navigation" term is deliberately used as a constant micro-adaptive pivot and shift depending on person, place and type of knowledge need. At the same time, it is surprising that the micro-adaptive navigation often occurred below the GP's personal awareness. The name of the theme has changed from the early poorly descriptive "front-line" to the "access" theme to "navigating the resource of the peer relationships" to better reflect the dynamic movement and destination of this entry point to the network facilitation.

This excerpt is descriptive of the challenges of time and mood, as participant BBGB explains. It shows how the delicate testing of readiness to engage in a peer relationship for the purposes of work can be variable depending upon the circumstances, a push or pull that determines if the knowledge resource within peer relationships is available to another:

> Oh no, two of the guys are full-time and one of them is part-time, but they're all – Dr A's always busy. Yeah and sometimes, you know, I do stick my head in to Dr A and he's sort of … is a bit abrupt or gruff and I sort of realise that he really hasn't got time for this and so I just sort of back off. But it doesn't make me want to go back and ask him the next time.
>
> BBGB (F age 51) Lines 298-303

At a system level, this quote by BBGB is also an expression of time limitation, which was almost universal within the description of general practice. There is a blurry line between a systemic level of the cognitive and affective load of consultation stressors (system and structures) and another practitioner's burnout (intrapersonal) and then intersubjective (interpersonal) style. The availability of GP peers due to scheduling and various shifts was also apparent with many participants. There are many layers of both push and pull factors within this quote. During the interview, BBGB described how she managed these at different times, in different ways, in different contexts and with different practitioners for resource needs. This was a common response and this constant navigation occurred with most of the participants. Here she contrasted a more reliable navigation and its apparent reasons, although she still wondered if it was her "perception":

> Dr B Female is a very sort of gentle and kind person. Dr B Female is approachable and she certainly never gives the feeling of, you're bothering me, you're annoying me, I haven't got time for this. Whereas – I don't think the other guys have actually ever done that to me, but maybe it's more just my perception that I'm bothering them.

BBGB (F age 51) Lines 291-296

This is an example quote showing the intrapersonal dance of feeling "safe" to ask sometimes but other times not. BBGB wondered earlier in the transcript if it was her. The practice-level interpersonal issues of an "abrupt or gruff" (male) GP contrasted with another "kind and … approachable" (female) GP. As an observable but reflective comment, it was hard for me to know whether the barriers were hers perceptually or with the "stressed-out" other GP or a little of both. Nevertheless, containing some of these approaches in sub-themes was helpful to understanding the complexity of these different approaches.

5.5.1 Sub-theme: the level of intrapersonal factors

"Intrapersonal" refers to the cognitive and affective domains within the individual practitioner. This cluster of navigation factors included intrapersonal aspects such as boundary setting, empathy including both dimensions of perspective taking and warm empathic concern, personal resilience, self-awareness, personal tolerance of practice variance, tolerance of variance in practitioner values, wellbeing factors, winning at things like diagnostic or procedural challenges and work enjoyment. All these factors assisted with moving GPs towards an affiliative peer-connected hive mind and GP dialogue. "Hive mind" was a term derived from the participants and has become a common usage term.

Empathy components: Empathy,[10] defined earlier in this thesis, was free coded in its clustered dimensions. Here "warm empathic concern" which motivates behaviour is one of those connection factors. The warm empathic concern part of empathy defined earlier has a motivational prosocial behavioural component. Participant AAE6 (M age 37) described this part of peer connection as being extremely important. He liked to have doctors in his practice who would talk to other doctors more generally:

> Yeah, I think like I said at the start, if you can just have that identification as well, that little clue of the doctor in trouble, the little voice that says, "There is something going on. Are you

---

[10] Empathy cluster: 1. perspective taking (cognitive dimension); 2. warm empathic concern (affective and prosocial helping or behavioural dimensions); 3. fantasy (imagination) dimensions; and 4. personal distress (inversely correlated) or overidentification.

okay?" I think probably in some ways that is probably the most important of it actually, is having that person who will understand what is the normal level of stress and what is the abnormal level of stress and they will tap you on the shoulder and go, "Something is not right".

AAE6 (M age 37) Lines 756-763

According to AAE6, this peer-connected person is a special and often well-known peer who can navigate using the peer-connected relationship already established to enable the navigation of the peer resource, which in this case is reflected self-knowledge and vulnerability. Then again, burnout in the other GP may be a barrier to connecting to a peer. This is where the duality of the push and pull factors for peer connection occurred and made separating out the navigation to peer connection more challenging. It was very dependent upon who was the observer GP and who was the participant GP perhaps needing an intervention, as AAE6 suggested above. This excerpt was coded for its intrapersonal dynamic of prosocial behaviour.

Vulnerability components: Many GPs talked about vulnerability issues, more often regarding another GP or as a theoretical idea rather than self-referenced vulnerability. Vulnerability was generally cast as a barrier to connection. Vulnerability as meaning contains several contributing characteristics such as: burnout, care burden and role conflict; cognitive fatigue from GP knowledge demands; empathy variations; patient safety errors; puzzling perturbation; tiredness-lethargy-fatigue; uncertainty; and upsetting feeling. These are all personally referenced, therefore intrapersonal, perspectives and feelings.

Here AACC (M age 63) described the challenges of peer connection in a busy practice:

I don't know if exhaustion is the right word, but certainly being busy with patients and then trying to think it is something extra for many, it's too much. I think many have decided they'll see their patients and take their money and go home, and they really don't have much interest beyond that in how the practice operates or trying to make it better.

AACC (M age 63) Lines 382-387

All these clusters of meaning contributed to a vulnerability that made approaching peers difficult or something to avoid. The difficulty appeared to be located within the cognitive-affective domain of the individual practitioner. "Puzzling perturbation" was about not knowing something at all and how

this might inhibit approaching some peers. "Upsetting feeling" was a feeling that was often difficult to describe using words and yet was upsetting enough to make a GP reluctant to approach a particular peer.

Patient error components: As an example of vulnerability and difficulty, the free code "patient errors" was a fairly muted response yet appeared important as it engendered a fair degree of emotion. GPs could aspire to "patient safety", which I coded elsewhere as part of a system approach, yet I referenced and coded "patient errors" as this related to their own personal practice. These errors were more difficult and very personal to speak about. Patient errors were a source of concern for many of the GPs in both groups, with the issue of managing and reviewing these needing very specific people to discuss with. Personal errors would cause most GPs to hesitate to connect with another. There was generally a lot of resistance and emotion around sharing issues in this domain. The discomfort and discussion by participants engendered some professional vulnerability. As a clinician, this emotion and potential vulnerable state was very familiar to me.

Regarding errors, very often the discussion was either theoretical, as in the next example, or about another GP's errors and not their own. This was a relatively muted discussion when it came to personal reflection. There might be many reasons for that, including medico-legal issues and confidentiality issues, as well as shame and hidden curriculums, but this seemed to become a barrier to seeking any GP peer for case or work review. Very often there was a particular trusted peer with whom clinical reasoning, reflection and support could be discussed in the case of patient errors.

This is BBRZ (F age 41) from the disconfirming group discussing how difficult it was to claim an error when the situation may be prescribing outside of guidelines in any particular single consultation:

> Yeah, and the relationship, the therapeutic relationship and context. Someone's not going to look at your – oh, you gave diazepam and temazepam to a 29-year-old single mother. They're not going to look back and see oh, look at that, when you first started her she was having four or five acute psych admissions a year and she's not had one for three years over the nine years of care. They're not going to look at that and say …

Yet according to BBRZ, an experienced medical educator, prescribing out of guidelines was a defensible situation when seen over the lifetime of the patient where a return to wellness may take some years. A fear of adverse judgement from peers and a fear of the legal system were pervasive in inhibiting the opening of peer-related dialogue amongst both groups. Many of the GPs had a very particular peer with whom there was a pre-existing relationship for this discussion and for many other aspects of vulnerability.

The next sub-theme involves the push and pull factors regarding the intersubjective dynamic or interpersonal space between GP peers and this largely occurred in clinics, but it could also occur at medical education events, medical political events and online in the virtual world.

5.5.2 Sub-theme: the level of interpersonal factors of navigation

The interpersonal context included the intersubjective space and the factors here that created a push or a pull *between* GP peers. Most often this was related to their clinic. It could, however, relate to anywhere else GPs found themselves potentially interacting with other GPs. In other words, within that GP-to-GP interaction I had to consider if any data point of meaning was particular to the GP-to-GP interaction or whether there were system factors also influencing it. The predominant discussion determined where the code was placed and sometimes the text was coded for both levels of attributes. The attributes contributing to this sub-theme include availability of GP peers, economic pressures between peers, the local geography and the physical space within the clinic or peer environment, and time factors. The final contribution to this attribute relates to leadership or practice-owner contexts.

The role of practice leadership contexts: Leadership or practice ownership presented some challenges in terms of setting the culture of the clinic as well as the experience of being a practice owner, which brought some further challenges in terms of peer connection. Practice leadership was a context that related interpersonally. Here AAH2 (F age 52) described her practice setup as an owner. She called herself the "interruptible doctor" working fewer sessions but staying in the

practice as a "clinical manager" to deliberately accommodate "knowledge collection and dissemination".

> But the doctors, particularly it's vital for the doctors, that time in the lunchroom, because that crossover time, whereas if it's during a consultation type of time, there's five rooms going, they might not mix, but that's the time when you think, you know, you stand out there and you hear everyone saying "Oh, you know, what do you think about this" and bringing up a result and having a chat. So, we do it informally a lot in that area. No one would have any qualms about buzzing someone and saying, "Can you come and have a look at this rash?" So yeah, it's generally people come to me in this room or else it happens in the kitchen.
>
> AAH2 (F age 52) Lines 208-217

Whereas by contrast, practice owner BBGQ (M age 65) did not encourage relationships with his medical practice staff for fear it would create some boundary issues within the running of his practice. His general lack of time and his deliberate attitude contributed to a different experience for the practice leadership as a context:

> A relationship with them – I wouldn't say so, because for fear that it might … that might complicate things. And also because I'm such a busy person already.
>
> BBGQ (M age 65) Lines 154-156

Practice owner AARL (M age 54) commented that whilst he was often the interruptible doctor, there was a cost to being so available to his medical staff for him:

> Do you know I'm totally used to it? It's a benefit, I think, I'm used to it, I enjoy it. There was a time when I found it difficult. I guess it's probably one of the reasons why I work three days a week now, instead of six, because it can be tiring.
>
> AARL (M age 54) Lines 538-541

The availability of peers component: The availability of peers to navigate towards appeared to be an attribute of managing the interpersonal relationship culture and environment for all participants. AAD2 (F aged 51) illustrated the structural issues of any practice and these occur mostly within the practice so are relevant to the immediate GP–GP intrapersonal environment, although as AAH2 (F

aged 52) illustrated above, some of this can be to do with practice leadership and was therefore coded within an interpersonal GP-to-GP context:

> So, we actually don't see each other because we're never here at the same time.
>
> AAD2 (F age 51) Line 37-38

The layering of availability of GP peers as a negative influence on the development of peer connection was discussed here more comprehensively by AAVA (M age 54). This has some overlap with a systems context but describes the issue of availability as an interpersonal factor that contributes to a negative movement away from peer connection. Thus, availability may have nothing to do with practice location or rural location and notably could occur in a "large practice". Notably too, there are at times some close overlaps within this to systemic issues:

> Isolation seems to be one of those things. So, we look at different – and so isolation's interesting, again I've seen isolated people within a large practice, perhaps isolated because of their personality or the type of practice that they do, but also geographic isolation or just being in a solo practice.
>
> AAVA (M age 54) Lines 140-144

BBAE (M age 61) described the interpersonal issues very well as time, availability and physical space. He illustrated the necessity of facilitation of the relationship quality to access the resource of the peer-connected hive mind:

> Because – it also have the sense of feeling that the other doctor that you feel to share the idea, that he or she is always happy to give time to you, discuss, because if you don't have time, and you feel that the other doctor don't feel comfortable to give you extra time to help share that information or idea, then you don't feel comfortable to have that thing, so that's why you need to get somebody to have a deeper connection, that if needed extra time, you can spend with the doctor, because time – everyone in general practice is very busy with schedules, so it's not easy to get time.
>
> BBAE (M age 61) Lines 306-314.

<u>"Someone like me" components of interpersonal navigation</u>: When coding the disconfirming sample, the unique code "someone like me" was noted. In light of information from the disconfirming group, this code of meaning was also found within the initial confirming group.

Here AAO8 explained the attributes of similarity she seeks in navigating to a peer relationship.

> So, I don't know if I'd have as much of a connection with say a fulltime male rural GP who's out there doing emergency medicine and delivering babies and that sort of stuff, but I can certainly find a connection pretty easily with another working GP mum who's trying to balance it all out.
>
> AAO8 (F age 39) Line 128-132

And BBXN (F age 60) discussed first the quality and knowledge requirements but also the values match regarding style of practice. Earlier she had described other practice owners being a benefit and later, after this quote, the deeper relationships for deeper issues that she used. This excerpt, however, particularly illustrates the many facets of attributes the participants discussed and indeed this was dependent upon the type of knowledge the GP needed. Notably BBXN was from the disconfirming sample and had ceased some of her previous peer interactions, which may have been why she was nominated as a disconfirming GP:

> I think just that you might practise in a similar way, so I think that you would have peer connection with people who have the same kind of ways of practising, maybe that they think of their patients in the same way as you do; that they, I suppose, practise medicine in the same way. That they are caring and follow the guidelines that we have out there, so that you feel like they understand and they would treat your patient in the same way that you would.
>
> BBXN (F age 60) Lines 103-109

In summary, there were many concurrently layered issues within the clinical interpersonal environment that contributed to a push or a pull with regards to establishing peer-connected dialogues.

<u>5.5.3 Sub-theme: the level of system factors influences on navigation</u>

Practice facilities component: Here participants described the practice facilities that enabled peer connection. These enabling non-personal factors might have been discussed as a wish list or else something their current practice had already achieved. They included the free codes of: food and nurturance, generalities of geographic location, lunch or gathering room, size (of practice) and numbers of staff or people (types).

Below BBSB (M age 61) from the disconfirming group described how he wished his workplace might be. Earlier in the transcript he had compared an earlier practice where the systems of practice had enabled connection and then contrasted it with his current practice where it was more difficult. This excerpt describes his wish or "longing" for a peer-connected space with food and nurturance. As the quote illustrates, separating out the conversation into separate push or separate pull factors is not easily done. The word "navigating" implies a constant change of direction and perhaps a continual recalibration of either push or pull peer connection. This is interesting because BBSB chose not to involve himself too much in peer-to-peer connections within his own practice by his own admission. Later he reflected that because he was married to another GP and put that entire "burden" onto her:

> I think that a regular lunch break is great. Everyone gets off from, say, one until two and then you can have a lunch. And if it was a successful practice, they could buy the lunch and you'd sit around the table and not only would you, you can discuss patients. You can discuss, okay, look, I think that the fridge in the kitchen is not working so well. My milk keeps going off. What do you think we should do? Just buy a new fridge. I know that's trite, but there are other things you can discuss, like the way the practice manages – this guy keeps coming in for drugs. Should we ban him from our practice? Just general …
>
> BBSB (M age 61) Lines 466-475

Whilst this did not happen at his current clinic, BBSB appreciated a systems approach to enabling connection and felt the cause of the effect at that level rather than at an interpersonal level. The enablement includes the practice characteristics, food and nurturance, and lunchroom. For the most part participants talked more about the practice provision of facilities and other staff than they did about food or practice size. These attributes helped them navigate the interpersonal spaces towards a positive peer-connected experience.

However, there were also imposed systems and structures that formed impediments to peer-connected activity. These attributes included the changing nature of practices, confidentiality as a barrier to support, financial issues and pressures, GP isolation, lack of safe spaces to vent, leaving practice or reducing hours, moral hazards, patient factors such as clinical or emotional labour, political barriers and otherwise non-specified system issues. So, whether GPs desired or were seeking peer-to-peer connections, the system itself created difficulties around accessing this work-related need.

Hidden curriculum and moral hazards: The system-imposed impediments on getting together also included broadly based barriers such as "patient factors" and "emotional labour". System-imposed barriers also described the "hidden curriculums and moral hazards" relating to the "system or culture" of medical practice. Systemic culture was referred to by AACG (M age 55) as the gendered "macho". AACG was discussing the affective knowledge work of diagnosis and human responses in general practice itself, but then he described a cultural view about the nature of invulnerability as a systemic moral hazard that AACG discussed is a part of the culture of medical practice:

> No not at all … it's always looking after everybody else's problems ... looking after everybody's issues, I'm all right Jack … Don't worry about me … she'll be right … um it all came out in our study … you know all those attitudes of ah … you know, I've got to be ah macho, I've got to get through this, I can't possibly be seen to be talking to the nurses, it seems like a weakness. I don't want to be seen to be weak so I'm not going to.
>
> AACG (M age 55) Lines 140-144

This theme contains important insights to the context and environmental influence on the establishment, or not, of peer connection. The system operates on the people within it from the culture of medicine to the intrapersonal, which created unique responses. This appeared to result in context-based navigation to the resource of peer relationships. Sometimes all of the factors were in operation at any one time, causing pivots and shifts within any navigation towards a peer-connected resource.

5.5.4 Disconfirming results in the story of navigation

It is important within these findings to consider the two recruitments and confirming versus disconfirming participant voices. What was found in the results is perhaps more subtle. To validate my interpretation of the findings, I compared figures on the word counts and graphical representations in barriers and enablement perceived by each group. There were no major differences in the graphical representations of discussions regarding the navigation theme. I did this to check my observation that there appeared to not be such a big difference between groups. I had not heard or interpreted major differences between the groups in terms of the ways of establishing and "navigating the resource of peer relationships". There was, however, plenty of nuance and depth that were broadly interpreted.

Looking more closely at the free code "someone like me" perhaps illustrates some of the commonality and demonstrates the important finding that most of the participants in both groups were involved in peer-related resources and seeking connection related to GP knowledge work.

However, this finding wasn't just "any" group and sometimes one group (wrongly) perceived another loosely defined GP peer as not being involved based on differences and similarities. Yet each group remained unaware that their so-called uninterested disconfirming peer was involved in some other network of informal peer connection.

The experience of BBGB (F age 51) from the disconfirming group illustrates this well. Words like "comfort" were not initially illuminatingly explanatory, but later BBGB broke this down into gender, feelings of intimidation, her illness, her lesser time in practice, the men being "busy", some of the other male GPs lacking skills in affective knowledge and reciprocity. One of her peers had interpreted this as her being uninterested in peer connection, whereas with the one female GP in the clinic with whom BBGB did connect there was a "comfort" based on gender and approachability, including the willingness to be mutually vulnerable, and there was reciprocity within the relationship. The relationships she did have were quite invisible within the recruitment and nomination process. Equally her illness, which necessitated regular time away from work, dominated the other nominating GPs' thinking as a way of seeing difference or othering.(266) This did not stop her approaching the other male GPs in her practice for peer-connected dialogue, but it

changed the nature, the depth and the frequency of her access to the resource of peer relationships:

> Whereas I don't necessarily feel as comfortable approaching the other doctors to ask for suggestion or advice, except in the context of when it's their patient and they know them well and I'm just sort of checking in with them that there was nothing else that they wanted me to do.
>
> BBGB (F aged 51) Lines 68-72

There was a lot more discussion from BBGB on male doctors versus female doctors and on the tolerance of vulnerability. It was curious to me that she was typified as a "not peer-connected" GP when despite her challenging chronic illness she was well connected and conscious of that:

> Because I would feel with the other guys, probably a bit stupid. I'm a bit dumb, aren't I, sort of thing. Whereas I don't feel that with Dr A Female because we usually have this … oh, I know, it's so difficult.
>
> BBGB (F age 51) Lines 286-288

And later she more explicitly described the issues of connecting and the complex layering of who to approach for what and when:

> Dr A Male is pretty approachable, although he does get a bit grumpy sometimes when he's stressed and things like that. Dr B Male, one of the other fulltime doctors, is always abrupt and makes me feel like I'm stupid if I ever ask him anything, so I tend to avoid him. Dr C Male, the other male is pretty kind, but again he gets really stressed sometimes and so it's difficult…
>
> BBGB (F age 51) Lines 367-373

Compare this to BBUF (M age 59), who was also in the disconfirming group but expressed things differently:

> I'd probably be all right; I don't think I'd particularly suffer. There's very few solo practices now, but if I happened to be in solo practice, I probably survive just the same. My main interaction is with my customers, not with peers.
>
> BBUF (M age 59) Lines 245-248

So there were unique approaches to navigating the resource of peer relationships. These were not so much stark differences between each group but more nuanced along a continuum of personal context and discussion. Even with my most disconfirming case, which I interpreted to be BBUF, he would later describe episodes of navigating the resource of peer relationships even as he denied it:

> No, no, knock on the next door – one of my colleagues is into women's health, I can't say that I'm expert in this area. So, if I have some difficulties I always ask. I had just today – a patient, I couldn't quite say – a very muscular tummy, I couldn't say how far she is in pregnancy, I need to know, because I need to…
>
> BBUF (M age 59) Lines 97-101

All participants described their various networks and navigations based on multiple local contextual factors. Some of these networks were not so obvious as others and some were below awareness, and this often became an "aha" moment during the interview. Yet a few others denied connection as being necessary whilst curiously also describing how they used peer connection. And there were others who openly pursued and fostered a practice culture of deliberate peer connection for the resources it delivered to the workplace. However, the complexity and particularity of the decisions made to approach or retreat were spread across the dataset.

5.5.5 Surprising findings within the theme

Navigating the resources of peer relationships as a theme is illustrative of both the complexity and the sometimes tightly adjacent borders of the sub-themes. Altogether, though, these components and sub-themes explain the story of the theme overall as one of navigation of relationships of knowledge. However, there were surprising findings within the theme.

The surprise of no group differences as a finding: I was surprised that the disconfirming group of GP participants were often just as resourceful in navigating peer relationships as the confirming peer-interested group. There seemed to be a need to access work-based resources even for the most "disconfirming" member of the project, BBUF (M age 59).

Another surprise in the findings here consisted of the degree of constant pivot and shift: This really explains the navigation name and it is a very dynamic movement. One first-level code could be a

push or a pull code towards or away from peer connection depending upon the observation point. There was constant movement implying a constant juggling of needs.

The surprise of unconscious or subconscious awareness as a finding: The other surprise was the hesitancy of GP participants to identify their own needs as part of the workplace. Frequently GPs used theoretical and other GPs' examples, often in place of their own needs or stories, particularly around aspects of personally referenced vulnerable human factors. This is particularly salient given the often unconscious, as I called it, but perhaps below awareness or, as one participant described it, "instinctive" need to connect. This appeared a nearly universal message across the dataset with the variance being in the method of navigating towards the resource of GP peer relationships as a knowledge-management network for work purposes. This was a latent message derived from the participants at the time of interview and coding, and called "unconscious".

There was also an interpretable "motivational drive" to achieve this GP peer-connected relationship. So, whilst the theme "navigating the resource of GP peer relationships" has a reasonable amount of descriptive content, there were also interpretations within the coding at interviews and therefore in the findings. However, surprisingly, some GPs were aware of the drive to relationship, while others were much less aware of this. For instance, often the facilitation factors of peer-connected relationships were classified as "not work" or using the pejorative "social" yet these factors drove the relationship which assisted the GP in the workplace with knowledge work. This aspect of the "below-awareness" cluster was coded at the first level of coding and interpreted as a latent (interpreted) code rather than a semantic (descriptive) code. This is a finding (reflexive thematic analysis) occurring from the time of the first interviews and first-level codes.

This finding that the experience of the relationship itself was underneath the GP's awareness is represented in the following extracts, with noticeably similar expressions between the confirming group and the disconfirming group.

For instance, here is BBUF (M age 59) from the disconfirming group (Lines 342-343):

> I never thought that it's so important, maybe because I always have it'.

And BBGB (F age 51), also from the disconfirming group (Lines 719-721):

> It's an interesting idea that I'd never thought about and when I reflect on it and talk about it, I realise how important it actually is without even knowing what it is.

Notably very similar sentiments came from the confirming group.

AAOO (F age 39) said (Line 230-232):

> So, it just makes a huge difference and I think I probably underestimated the difference that it did make.

AARL (M age 54) had an epiphany:

> When people say that, you know, whatever it is the way they approach something and chase up some result, or do whatever it is, or, you know, coordinate some patient's care, if they're discussing that in the tearoom, it brings an effect, the behaviour of everyone else. So yes, I think I probably really underestimate how that actually … importance of it.
>
> AARL (M age 54) Lines 424-429

AA6X (F age 39) from the confirming group described the sort of "unconsciousness" regarding a GP's personal needs being a requirement of work that is below awareness. AA6X characterised peer connection in this initial code of "unconscious" need. I have included for context my preceding question here as she referenced in the quote (line 701-708) the phrase "as you say". This seemed to reflect more the issue of asking direct questions on what the participant thought about a definition of peer connection. If they ever appeared stuck, after a while I would often encourage them and empathise, saying something like, "Yes, it's a hard one. Many people find it hard". The question is included to give context and demonstrate this was not a leading question from the researcher:

> KP (preamble): You sort of skirted around this, the role of peer connection in resilience. How would you rate that? How strong is the role of peer connection in resilience?
> AA6X (F age 39): In building resilience?
> KP: Yeah.

AA6X (Lines 701-708): I think it's very important. It's still only a facet of all the other things we do for ourselves, like getting some exercise, eating well, having a supportive partner, enjoying things outside of work, but I would see that the peer connections would be a strong pillar amongst those. But as you say, it's probably not something that we think about. We think about exercise; we think about eating well. We don't necessarily think about the way we build resilience for work.

This lack of awareness of the facilitation of work-based factors towards resources held by peer colleagues was reasonably consistent across the dataset with the exception of AAH2 (F age 52) from the confirming group, who had not named the relationship as peer connection but had set up her practice deliberately to perform it as she interpreted it to be a part of the facilitation of quality general practice.

5.5.6 Conclusion to theme 1

"Navigation to the resource of peer relationships" is a large theme and largely descriptive. This is an important pragmatic illustration by the GP participants of the complexity of their daily work. That there is an artificial divide between so-called socialising and work is perhaps, in a pejorative cultural sense, an interesting finding. Somewhat artificially yet helpfully, these findings are layered in a constructivist sense from the intrapersonal through the interpersonal to the systems of the GP workplace. The initial motivating behaviour seemed to be access to "informal work-based knowledge". Yet for some people this was below a conscious level of awareness, as an "instinctive" approach.

There is a complex layering of the connections once achieved, which is part of the next theme and the middle of the story of the research. This is the destination of those GPs who successfully navigated and it relates to workplace needs, the oft-called tacit knowledge requirements. It is a much broader concept than simply cognitive or more traditional medical factual needs. "The peer-connected GP" describes GPs drawing upon peer relationships to support their work and wellbeing. These informal knowledge networks are work-related resources and play both affective and practical roles. The peer networks were important to participants in different ways and for different GPs. This is the middle of the story in the findings. Importantly, this informal knowledge

work occurred in both affective and cognitive domains, which appeared necessary to different extents for different GPs.

5.6.0 THEME 2: INSIDE THE PEER-CONNECTED HIVE MIND AND THE GP DIALOGUES

This theme is introduced with a discussion as a whole and then the theme is explicated as sub-themes. Commentary from the disconfirming group findings follows, finishing with a summary conclusion. This theme describes part of the story within the whole story. It is the middle part between the initial navigation and the destination by way of peer-connected experiences. This middle theme describes what happens when peers are in that connected intersubjective space which is the experience of peer connection. I and some of the participants initially envisioned these connections like a hive mind, named for its dynamism and busy but purposeful coordination. This theme contributes to all three research questions but especially research question two and the psychodynamics of the intersubjective space viewed through a Rogerian lens.

This theme reveals a practical dialogue that clinicians engage in with their peers. By dialogue I mean a "to and fro" exchange of clinical knowledge between peers to fulfil the patient and physician context of evidence and rationale for, or reflection upon, clinical work. The peer-connected GP engages with others in a practical dialogue within the relational intersubjective space between GP peers. At its most basic, these relationships can be seen to have a simple phatic or "chatty" use. However, on probing the participants, the connection was invariably a work-based problem-solving relationship. Most participants described the relationship role in two parts: firstly, cognitive-based, clinically focused mind-lines, which represent clinical knowledge in its broadest sense; and secondly, deeper feeling-based, clinically focused heart-lines, which served an affective-needs–based role within general practice workspaces. Very often there was overlap between the different sub-themes. However, the heart-line sub-theme is more restricted in terms of to whom the participant would turn. This relationship was in a constant dynamic and very much part of a work practice. Within these two main parts, a third part as a shadow was often mentioned. I have called this the "out-of-line" GP, which represents all the negative intersubjective spaces. This negative and avoidant relationship dialogue is sometimes theoretical and sometimes illustrated with real examples where a dialogue was not desired. I have included this as part of the

overall story of peer connection, as it was mentioned simultaneously and often side by side with the mind-lines and heart-lines sub-themes. The out-of-line sub-theme was a negative dialogue, but a dialogue nevertheless. Without these connections, very often the participants suggested they would leave their practice. Specifically, when asked about the importance of these relationships, most participants rated them highly.

This quote from AA6X (F age 39) encapsulates most of the nuance of the overall story of peer connection:

> I think it's reflective. I suppose it has its place in having a reflective role, so being a mirror for the way you're doing something in looking at "Am I doing it right or wrong?" or "How can I be doing it differently?" It's a support system, so for clinical knowledge, but I suppose also, as we've done, it's that emotional part as well, stuff that you can't get from people who aren't GPs sometimes. So it has a reflective role and probably actually those two things: the reflective role and the supportive role. Both of them probably have a clinical context in terms of knowledge and the way I practise, but also probably that deeper emotional kind of "How am I actually going? Am I going okay? What am I doing to look after myself? What am I doing to make sure I don't burn out?" It does it in a supportive way in that I have people that I chat to … to recharge my emotional battery, to give me the knowledge that I need that I might not have.
>
> AA6X (F age 39) Lines 910-925

Figure 5.3 Theme 2 components.
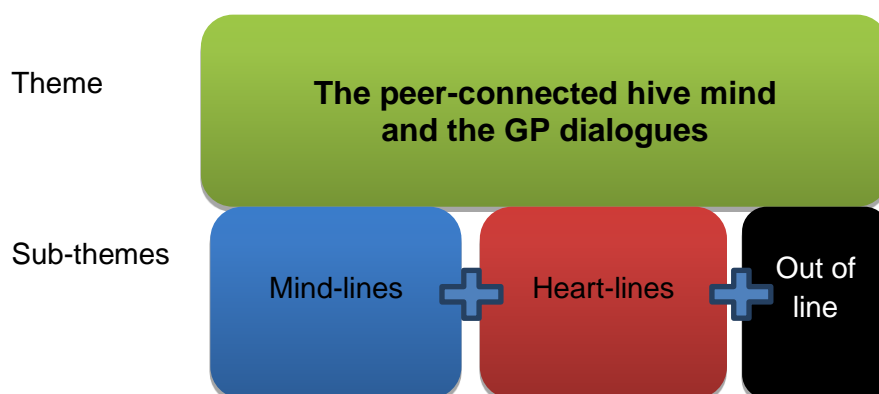
The first and most easily discussed and accessible intersubjective space is the sub-theme of "mind-lines". "Mind-lines" are what I have experienced through my own GP career as everyday interactions that peer-connected GPs engage in and most of the participants appeared connected in some way with a large informal network. However, this was done selectively and at some perceived level of known level of expertise and an ability to relationally manage the other GP. There were identifiable requirements of affiliative alignment, of cordiality and of trust, and particularly of respect for levels of competence in the required knowledge domains.

AAVA (M age 54) described a fairly simple response to the concept and practice of work-based dialogue with peers. This was early on within the interview:

> However, we have a compact tearoom which is a buzz at lunchtimes and as much as possible I think we all try and spend a bit of time in the – I certainly try and spend a bit of time in the tearoom with the younger doctors, whether it's clinical discussions or other things. But often there's clinical things going on, so it's a really good environment to share and support and feel supported.
>
> AAVA (M age 54) Lines 63-68

In the next quote, AAWM (M age 40) went into more depth about the various levels of conversations which were based on the various levels of relationships. It appeared that "straightforward" clinical issues would be managed by "straightforward" work-based relationships, whereas more challenging clinical issues might need a more specific relationship and here we also see the GP who is "out of line", another part of the overall theme. AAWM talked earlier in the interview about the fuzzy boundaries in the different relationships, yet most GPs in the project clearly differentiated even the deepest GP work relationship from friendship. In some ways this excerpt is a foreshadowing of AAWM's later interview comments around his own burnout, his personal distress and other doctors with whom he interacted with at that time:

> Oh yes, most definitely, yes. I think so. I think those of us who are friends as well as colleagues will interact at all levels, talking about, well, the most intimate things that we've experienced, or so on, to just a colleague I suppose that you don't see often. But there's

always that mutual respect and we'll talk about certain things, but there are colleagues that we don't talk to as often, different levels.

AAWM (M age 40) Lines 318-323

BBJE (F age 41) also discussed in a similar way the mind-lines concepts and their functional use. BBJE described using specific colleagues for specific knowledge domains and the everyday work of general practice. Notably, all the eight GPs in the disconfirming group, who were recruited due to their perceived lack of peer connection, discussed mind-lines as an accepted practice. Across the whole dataset, the context for peer-connected practice was often a just-in-time moment, which is a more immediate time frame. There was very little emotion connected with this discussion and the presence of this was taken to be a matter-of-fact everyday occurrence in practice. It was said by participants to be available more easily in a "good practice":

> Yes because I, and again I'm the junior, so I'll go, I'll ask seniors specifically about, particularly if they've seen the person. I might say "You know this lady, I saw her" because if they go away on leave or something I might see their person, or I'll see them on a Saturday or something. Or if it's something about, something they know more about because again we've got women's health people and people that do fertility and that kind of thing. And so, asking about their area of speciality and I do a lot of that with those particular speciality things. And again, it's in a broad sense of, "I saw a person with this particular problem, what would you do?" kind of thing. And often it's testing I hadn't thought of or doing a certain imaging versus another imaging, or who to refer to a lot. Because one of our guys used to work for – he was the medical officer for a football club and so he's really good at knees and so my knee knowledge is, you know, the basic kind of knowledge that everyone has. And then I'll be like, and he's like "They've pulled this and they've done this exact thing and you've got to send them to this guy and get this scan". So those kind of things, yes.

BBJE (F age 41) Lines 231-248

Whereas BBGQ (M age 65), recruited as part of the disconfirming group, described himself as being very limited in his connections and notably he used the opaque word "social", which is unclear and suggestive of non-work-related topics, yet he described utilising these "social" occasions to talk about medico-political issues, practice management and even medical

informatics and technology. Perhaps "social" was his word for informal? His implication here was that medical dialogues can be too much and "not relaxing":

> So, to me, having connections with other doctors, more medical problems, to me, that's not relaxing. I'd rather do something else. And the only peer connection I have is during meetings with other doctors, organised by a drug company, it's more of a social thing, I guess.
>
> BBGQ (M age 65) Lines 87-91

BBGQ later, however, described his mind-line connections. This is a contradiction of the earlier statement. I am not sure if this was because he became naturally more comfortable as the interview progressed or if he had come to understand the questions around connecting with peers better. Interestingly, whereas BBJE (F age 41) used the word because she was the "junior", BBGQ suggested he used the connections because he was the "senior":

> BBGQ (M age 65) Lines 209-215: For instance, I've got younger doctors, and sometimes just – they might be more up-to-date into some topics … Yes, clinical work. Especially if they come from another practice, you can discuss about patient management …
> KP: You find that helpful?
>
> BBGQ: Yes, I think it's part of sharpening the practice.

Overall, the mind-line part of the story of peer connection consists of largely clinical information in an informal just-in-time moment of not only case studies but also specific responses to a multitude of needs arising within the general practice workplace. In the next quote, AACC (M age 63) referred to the "things" which in his case consisted of clinical knowledge, case studies and consulting skills:

> But we do pop in to each other and – or depending who's around at the time may send an internal message asking one of the others to come and either look at a patient with us or we'll try to catch up with them to talk about things.
>
> AACC (M age 63) Lines 77-80

However, the requirements for knowledge were broader than clinical knowledge alone. There was role-modelling and vocational learning:

This doctor I'm telling you about, so enthusiastic about general practice, if he can show these young doctors what it's all about and how to achieve balance, then that's how we can create more happy GPs.

BBGQ (M age 65) lines 436-439

There was a need for ongoing business skills and dialogue around this. AARL (M age 54, Lines 132-134) said: *"About other medical things and particularly to do with practice ownership and running practices and all those sorts of things"*.

Even advocacy or political knowledge was considered a necessary dialogue to better empower general practice through informal connections:

They were a very dynamic group that wanted to make change and ah … And so we are still engaged and the point I am making is ah if you make good connections then you can build things with them.

AACG (M age 55) Lines 605-608

Regarding the qualities needed within relationships of the mind-lines, there was a requirement for a certain amount of peer reciprocity:

I'll cross-refer to him and then he'll feed back what the appropriate response was or what he did that worked or didn't work, and so I find that really useful, and then I get his Pap smears.

AA6X (F age 39) Lines 525-528

Plus, a sense of teamwork and a level of trust in the other peer's knowledge, yet also valuing diversity:

I think it looks like a team that has some diversity but also has some unity in terms of values and systems and approaches so that people don't feel like they're bucking the trend or having to work against the grain with their own style.

BBRZ (F age 41)

That level of awareness about the knowledge of others appeared to be a part of the social capital of the workplace that contributed to patient care. Relationship types were important and related to being able to facilitate this mind-line part of peer connection of informal clinical networks. The dialogue occurred often in a reflective manner and this was coded as a "two-minds" process where an independent peer was utilised to help problem-solve a clinical problem as a two-minded reflective practice:

> It's actually good for me to have somebody who I actually do see on a consistent basis where we will actually talk about those sorts of things, because I think it's actually good to actually have to stop and think about what you've done and how you've done it.
>
> AABJ (F age 57) Lines 177-181

A certain amount of friendly criticism was tolerated and here BBJE (F age 41) described a collegial case review of a patient by a "colleague" and this was framed as a valuable review and important function of the mind-lines of peer connection where familiarity with the patient could sometimes mean missing things and so a "fresh set of eyes" was helpful:

> You know, you see them [patient] all the time for their run of the mill stuff and you don't necessarily … it doesn't necessarily occur to you to do whatever … the [thing] … because it's a fresh set of eyes and that sort of thing.
>
> BBJE (F age 41) Lines 181-184

Criticism could act as both a benefit and a deterrent to further interaction depending upon the level of relationship development. Here BBXN (F age 60) discussed the challenge of criticism even though earlier she described how she had participated in feedback with peers. So, there was good and bad criticism, and it very often depended upon the quality of the relationship and upon the knowledge of the GP peer who was delivering it. BBXN (Lines 214-215) said: "Yeah, we don't like criticism. Our job is all the time trying to do the right thing and make it work for someone else".

Mostly there had to be a level of collegiality, which this quote illustrates as a sort of taken-for-granted professional resource facilitated by a general friendliness. Notably, AAD2 (F age 51) had left previous practices where this was not available:

Well, the GPs who work here, I feel we all have good relationships. And certainly the guy who was sort of the founder, who started it up, if I've got anything that I want to ask him, I just ask him.

AAD2 (F age 51) Lines 152-154

Systemically, apart from new knowledge there was an important component of "benchmarking of knowledge" commonly described. Benchmarking gave a type of reassurance as a type of "checking in" with another GP that a clinical conundrum was being managed in a similar way. This means entirely new knowledge was not being sourced but it was checking that established knowledge was still current and a part of accepted practice. I interpreted this to be a peer-connected, heuristic way of keeping up with the large knowledge needs of general practice, which is why the first-level code was labelled "benchmarking knowledge":

Our doctors will come in and say, "Look, you know, I'm probably fine but would you mind, you know, I just want to talk about this patient".

AAH2 (F age 52) Lines 105-107

The "variation in clinical practice" became a part of the mind-lines context and the overall part of the GP peer-connected dialogues, as again there was some elasticity within clinical diagnosis and management. The variation in practice characteristics allowed for some physician variation, but also considered it within the realm of normal practice, as AAS7 (M age 39) insightfully illustrated in a sequence of responses. AAS7 made a series of statements in a long discussion of the management of the "cognitive labour" that goes into clinical decision-making. In some ways other GPs could accept or reject a conversation regarding varying practice or medical evidence. It appeared that getting that conversation to a successful conclusion was very dependent on relationship and emotion, as well as context:

AAS7 (M age 39) Lines 620-622: Yeah … we each have our own style and, for the one problem, there are lots of different ways of approaching it and probably most of them are safe.
And then:
Line 659-660: We spend a lot of time thinking about our patients and we want to do it right.
And then:

Line 675: And so we're quite invested in those decisions.
Finally:
Line 679-681: So if you tell them that they're wrong, that's actually an insult to their intelligence and their reasoning and so forth, so I think that's why it's hard.

Mind-lines have importance in the overall story of the data as they were clearly used and practised by all participants. The relationships within mind-lines networks expressed qualities of the Rogerian framework, utilising congruence and non-judgement with peers, whilst tolerating some diversity and feedback of practice as a benefit to clinical practice. This was done within the very specific types of friendly relationships that had been established within the practice or its surrounding medical environment such as meetings and conferences.

The next sub-theme, which is a deeper and more specific relational engagement with a particular peer, is heart-lines. This relates to affective knowledge work within the work practices of GPs.

5.6.2 Sub-theme: heart-lines and affective GP knowledge work

The second sub-theme within the peer-connected GP theme is called heart-lines. This represents a deeper level of connection and relationship which enables or requires a greater sharing of perceived vulnerability. This is a very particular relationship that appears to enable a form of informal supervision. The participants used words like "debriefing" when describing this part of the peer-connected relationship. This informal supervision appeared to allow for debriefing and recalibration of emotionality or affective knowledge needs related to the work of general practice. A particular relationship occurred with a very specific peer. This was a protected and very specific relational space. There was a positive emotional tonal value to this and some emphasis on how vital this deeper affiliation was for many, but not all, participants. There was greater emotionality describing this aspect of peer-connected experiences. Many participants described this as a vital part of their practice:

I think it's high stakes and I think general practice is always high stakes. You're only that far away from a mistake and you're only as good as your last mistake. So I think if anything you can do to enhance your ability to practise well and to practise safely and to look after each other, in the cases where there's been an adverse consequence or a death. We do a lot of palliative care and so there's a lot of sadness around. Although we suck it all up, it's

also good for people to offer assistance or just a friendly tap on the shoulder and a pat on the back and well done.

AAYU (M age 62) Lines 524-532

The heart-line dialogue was, according to AAYU (M age 62), for a specific "type" of practitioner because the patient type or practice type was not accidental but interpersonally relational. AAYU earlier discussed other GPs known to him who had not been able to manage the affective content of general practice and who had reduced their patient load radically or left generalist practice. Not all GPs went into this part of generalist practice, according to AAYU, which is reflected in the results where only some participants utilised heart-lines. Underlying this need, AAYU was talking about a particular skill set of clinical affective knowledge work that required some further knowledge clarification with peers:

> So, if you're the person who attracts the psychological sort of issues, then you're stuck with it, you're not going to change. That's largely to do with the sort of person you are and there are people who are great, they're very organised, they're very cold in their approach to a problem and they'll be out at five o'clock. There's a role for them too, because people will want a quick-fast, they don't want to talk about the underlying problems of why they're there, they just want in and out for a certificate. There's a role for those sorts of doctors too, but they're not necessarily the ones who will be able to embrace, talking about the family issue. It'll be too difficult for you. So the personality that you bring to the profession I think has value, whatever it is, and as long as you can find the niche that will be useful.
>
> AAYU (M age 62) Lines 581-594

BBSB (M age 61) from the disconfirming group went through a process during the interview where he changed his story from denying a deeper heart-line peer connection to reflecting it might only exist between himself and his GP partner to later again acknowledging how important this type of connection is:

> No. No, I don't. I am lucky though because my wife is also a GP. So if I am troubled with something, I can burden her with it. But it's usually okay. So, I actually don't interact.
>
> BBSB (M age 61) Line 71-73

BBSB then described tearoom conversations and the enjoyable nature of work in forming relationships through informal discussions about the more difficult affective parts of patient histories and patient behaviour:

> Yes. I think we would do that every day. Part of it would be an amusing patient, like a funny little story. The other is oh my God! I had this nightmare of a patient. I just could not get her out of my room and she just kept [saying] this and this and this, or I had this crazy patient who just wouldn't listen to me and didn't know what was going on, or something like that. We would do that every day.
>
> BBSB (M age 61) Line 268-273

It is interesting that he initially described not interacting and then towards the end of the interview he began to reflect that he did interact quite a bit and that it was important for his work practice. This was a reasonably common reflection and moment of meta-cognition amongst many of the participants:

> And they can sympathise with you and say, yep, yep, we've all done it. Then you go, oh my God, that's good. I'm not the only one. Even though you know that it's good to get that positive reinforcement.
>
> BBSB (M age 61) Lines 284-287

BBSB described more reflectively the issues of judgement or a "lack of positive regard" in a relationship with another GP as barriers to connecting for knowledge requirements. This was coded as heart-lines for the emotionality of the following discussion suggesting there was fear or vulnerability around judgement:

> Well, someone who I've worked with for a while, who I know won't be someone – because they might go, this doctor's a dick. He didn't do this. Everyone knows you do this. Well they probably don't think that, but that's what I would think that they would think. So someone that I have built up a relationship with that – that I know – well they might judge me, but they won't tell me.
>
> BBSB (M age 61) Lines 822-829

Near the conclusion of the interview BBSB did comment upon noticing how relationship qualities facilitated some important work-based conversations. This insight was similar in timing to a

revelation by another male participant AARL (M age 54). This is an interesting and repeated finding in both groups of participants. Both these male participants were married to other GPs:

> Well look, it probably – see, it's something I never have thought about. At the beginning, I would have thought – like yesterday, I would have thought, peer connection, probably not that important. But I think when you are forced to think about it, it's a lot more important than I would have realised before. And I have – even though I may have said at the beginning I don't have a lot of peer connection, I probably do. But you don't recognise it because it's part of your life.
>
> BBSB (M age 61) Lines 833-840

The most disconfirming voice, BBUF (M age 59), suggested, however, that he no longer needed this type of interaction, relying on mostly his acquired knowledge over life and not letting his patients' concerns trouble him too much once they had left the consulting room. He still recognised that this deeper type of reflection, reassurance and connection was needed by many "other" GPs. The following statements support the interpretation of a disconfirming voice and BBUF's comment occurred towards the end of the interview. However, BBUF did not feel that this heart-line dialogue was a level of connection that he used, needed or desired. He only talked about it metaphorically and in some ways differentiated himself from those GPs who might use this type of relationship, illustrating the complicated fuzzy relational edges with the other sub-theme of the "out-of-line" GP:

> BBUF (M age 59) Lines 172-174: There's nobody else will understand them as other doctors. So this connection, because they feel the other doctors go through the same thing, they understand better.
>
> Lines 607-610: Yes – peer connection is relationships with your colleagues. Again – I still don't think that it's anything crucially – that kind of thing. Not for me. For younger doctors, it probably is. For older doctors, I would say that it's less.

Yet other older doctors did describe the necessity of the deeper relationships and later went on to talk about the need using terms like "debriefing" and relieving psychological distress. This was always, however, a very particular relationship and did not occur with just anyone due to the risk of an less than empathic response, illustrated here by BBXN (F age 60) from the disconfirming group:

BBXN (F age 60) Lines 199-203: Yeah, because I think you need to know that they are on the same page as you and would understand what you're talking about and would be quite empathetic to what's going on.

KP: And if they weren't?

BBXN: You probably wouldn't divulge.

AAOK (F age 35) alluded to "coping" with the workplace and this coping aspect was asked of all participants, particularly in terms of deeper affective needs of the workplace facilitated by peer-connected relationships:

So, I think the connections for GPs are unique because our job is different for many people but it's not just because it's about career and upskilling in your knowledge. But it's just about coping and managing that sort of long-term career, which actually is hugely stressful and has so many impacts on people in terms of raising alcohol levels and suicide rates and so forth.

AAAOK (F age 35) Lines 550-557

In both groups of participants, "benchmarking distress or psychological impacts" aspects of the workplace were discussed. There were by contrast just five participants across the whole sample who did not describe psychological impacts of the workplace. AAWA (F age 38) more clearly described the types of work-based affective learning needs that would occur in a deeper heart-line connection:

So it's sometimes, it's just about verbalising sometimes your surprise or your discomfort with the interaction or what makes me feel uncomfortable, not necessarily the patient but just something that the patient's disclosed and you think, I've just felt a bit gross about having heard that, I just need to actually get that off my chest, just to make sure that somebody else feels like I do because that was weird, you know, we're only human, like, you know, we're all trained to sit and be very professional. But, you know, sometimes you just go on crumbs. That's really outside the realms of my life.

AAWA (F age 38) Lines 657-666

AAXW (F age 47) more specifically talked about the traumatic situations that some GPs deal with and how limited the audience is to be able to debrief about some of those distressing issues within

practice. Here she included the psychological stress and benchmarking of that distress within the concept of peer colleagues and that "caring" relationship:

> I think we all need people that can support us and care for us, and I think general practice is a very stressful job. We deal with quite a few traumatic situations. You know for confidentiality reasons you can't come home and talk about what you do at work. You can't talk to non-medical friends about those things. I think we do need to be able to debrief and talk to colleagues.
>
> AAXW (F age 47) Lines 515-521

BBAE (M age 61) from the disconfirming group tried to talk about this action in generalities and even with probing I could not generate further insight; notably, his first language was not English. He still indicated that this person needed to be someone close to him, which is interpretable in this instance to be someone well-known and in a deeper relational affiliation than others. Emotional safety with peers in this affective conversation was recognised to be essential:

> The unique things is to have a good relation, basically, that you have a sense of feeling that you can talk with the doctor, whether it is personal feeling, maybe nonclinical, or something clinical that you feel would be embarrassing to ask silly things, but you need to make sure that the thing came into your mind to share with others, so there's a very important part to have a GP connection with each other, particularly you might – you should have somebody very close to you, that you can share those feelings.
>
> BBAE (M age 61), Lines 243-250

This was followed up within the interview, but, despite several probing questions, I only got to the point of "comfort" and avoiding embarrassment as reasons for the specificity of person and type of relationship.

BBXN (F age 60) asked very quietly near the close of the interview about how she became aware of the facilitation of work practices and needs by peer-connected relationships. A type of need for benchmarking or normalisation of her feelings was her question in response to my final open-ended invitation to make any other comments on the research and interview schedule:

Yeah. No, it's been … it's interesting to talk about it, actually. Just what's important? So no questions, really. Other than do other people feel the same?

BBXN (F age 60) Lines 579-581

By contrast, BBRZ (F age 41), again from the disconfirming group, articulated very well the need for heart-line dialogue and she did this relatively early in the interview. BBRZ used medically normative terms such as "supervision", which has some degree of interpretation to be about cognitive but also affective knowledge needs:

> I always think it's interesting how psychiatry and psychology have this mandatory supervision element within their best practice and accreditation guide and a GP does so much of that similar sort of holding of and working with people's psychosocial stuff and yet there's no requirement at all. Sure, you need to do your mandatory CPD stuff but you could do that entirely in clinical stuff and not ever really address the factors, the psychological element that you're dealing with and how your psychology can impact the patients and that theirs can carry back and impact you.
>
> BBRZ (F age 41) Lines 215-224

Participants generally talked about deeper social and emotional learning needs in practice using formal terms such as "supervision" as BBRZ did above or more frequently "debriefing" and sometimes merely describing an episode of psychological stress and a need for a witness. The "witness" was a state which I interpreted to have the qualities of a non-hierarchical, non-directive, non-judgemental, peer-congruent attitude of acceptance without direction. It was usually and consistently a very specific peer. Notably, in this next excerpt AAH2 (F age 52) described how she got some formal professional supervision for a particularly "toxic" patient. However, she still felt the very important need of her relationship in practice with Dr A, a female colleague. Here she described a very difficult patient whose sessions she had found very emotionally challenging:

> I used to not sleep knowing that she was coming in the next day. And in general practice you don't have the – had I not had Dr A, if I'd been in, you know, another practice, I'd been doing locums prior to that, so if I'd been somewhere else I would have been, you know, God knows what I would have done. But I managed to get through that and I felt supported, even though Dr A didn't do anything specific, there's nothing that she did that was specific except be there and witness, and it's the witnessing sometimes. Someone else witnessing

how hard you're working, trying to work through a problem or how difficult it is for you and just being witnessed, they don't have to fix it. But at least they can recognise it and it helps you to recognise it as well.

AAH2 (F age 52) Lines 716-727

AAOK (F age 35) explained that for her witnessing explained "the why" and needs of the connections at various levels and how this helped her manage her "burnout". The avoidance and management of burnout were common concerns across the dataset with a few exceptions. It is notable that "your burnout" is a third-person attribution of vulnerability:

Yeah, it just sort of like unloads your steam a little bit, lets you put it off and then resets that balance for next time. Whereas I think if you didn't have any outlet for your frustrations or for your grumbles about patients, I think they'd probably build up and add to your burnout.

AAOK (F age 35) Line 354-358

BBGQ (M age 65) from the disconfirming group was quite steadfast that peer connection was not something he did much, at one point suggesting it was difficult because he was a practice owner. He was a disconfirming voice on any need for peer connection, but did talk about reflective and meta-cognitive practice using the iconography of religion. His particular solution was to emotionally reflect using his spirituality in a sort of emotional dialogue with his deity. This was a unique practice within participants interviewed and illustrates the high capacity of most participants to engage in novel practices that suited their needs. He felt that he had no right to judge patients, even the more difficult of them, and later said how he would pray for guidance rather than turning to peers. He also mentioned his view of his need to manage the practice ownership with some distance. The spiritual resource he developed which aligned with his values was only discussed later within the interview when I assume he became more comfortable:

To me, because I'm a churchgoer, I evaluate success in a different way. I judge myself on how I'm going to be judged. Because we are all in the gutter, we are all in equal need of equal doses of salvation. So that means that you don't – you can't be high and mighty, and you approach life with a bit of caution.

BBGQ (M age 65) Lines 314-321

Later in the interview he was discussing a difficult patient encounter that had challenged him and I gently checked and rechecked his peer interactions within that context:

> Lines 512-515
> KP: Would you ever go to a peer to help you with a difficult patient in that context? I guess we call them heart-sink patients. Have you ever needed to go to a colleague to talk about …
>
> BBGQ (M age 65). No, no. I trust God.

In summary, heart-lines is a deeper part of peer connection encompassing informal debriefing, as well as informal supervision. Witnessing and understanding of practice difficulties assisted the GPs to recalibrate, validate and reset their emotional needs and objectivity. It appeared deliberative and action-oriented, rather than a passive or an accidental happening. Heart-lines usually involved a particular peer who was known to be safe and to be accepting of vulnerability. They required an established deeper relationship with a peer. There was still self-directed just-in-time learning but in an emotional way. I interpreted this as an affective learning practice. These affective needs ranged from dealing with challenging emotions such as anxiety, confusion, uncertainty and fear to managing complex patients. "Countertransference" was frequently mentioned by participants.

However, some participants appeared to not always need this type of heart-line dialogue interaction. Those who were married to other GPs might use their spousal relationship for this purpose. Further, one GP used his spirituality in a form of objective dialogue about challenging patients. Another GP denied the experience altogether. These were the exceptions. The fully disconfirming archetype seemed to be one of an older male doctor, like BBUF (M age 59), who limited his own emotional reactions to patients within GP care. He explained that in his experience not only did he not need to have heart-line peer relationships, but also he did not need the more everyday relationship of mind-lines. BBUF was the only one of the participants who stated he could be a solo GP.

5.6.3 Sub-theme: the out-of-line GP peer dialogue

The out-of-line GP is the final sub-theme of the GP dialogues and included here as an often metaphorical "other GP" who was "not like them". This negative dialogue was used by participants

to illustrate reflectively a particular issue about which they needed to have dialogue but not with a certain other GP type. There were also some qualities of other GPs that contributed to a decision to *not* involve that other GP in the peer-connection.

Coded within this subtheme was "othering" GPs, a GP that the participants would *not* go to for some reason. Sometimes this was a mythical "not me". Sometimes there was more clarity regarding gender or judgement or personal style or perceived knowledge, values, even age. Sometimes the GP would declare they were the "other GP", as in interview 8 with BBGQ (M age 65):

> Then I went into science. I was mixing with kids seven, eight years younger than me and it's back to the student days again, after one year of internship. After that, I think my brain got a bit rewired and I just see things from both the medical and the computing world. I don't know. I see things differently, maybe.
>
> BBGQ (M age 65) Lines 338-343

Sometimes the GPs discussed their own emotional barriers and excluded themselves. This was included in the peer dialogues for the reason that it was consistently held up against their own self in comparison. It was a negative but equally paradoxically connected dialogue. "Out of line" refers to an out-grouping compared to an in-grouping. "Illness" was a first-level code and an attribute that was one of two codes appearing uniquely for some members of the disconfirming group. The out-grouping represented a GP who was out of line perceptually for peer connection but used as a reflection point to reinforce the other, more often used relationships. There was consistently strong emotion associated with this sub-theme and especially the attribute of identifying another GP that I named, for want of a better expression, using the Australian colloquial expression "the other guy". Most GPs could describe someone who fitted this description:

> And then there's one GP who's at the far end of the corridor and he tends to keep to himself a bit more anyway, so I don't tend to ask him much, but if everyone else is busy I would happily ask him and he'd be all right with that, I think.
>
> AAC5 (F age 34) Lines 221-225

AAC5 then related some challenges when her practice merged into a larger practice. She spoke about a practice principal taking significant time off, the practice owners getting a financial windfall from a property but then admonishing everyone to work more at the practice as well as being more rigid with the doctors' contracting roster. Her response is detailed below. There were a number of significant changes to the whole practice, including a new building layout and larger staff numbers. It was hard to know if she was othering herself and disconnecting out of a previously functioning group or if the group had changed with a new management team and new culture that caused the disruption in the relationships. Not only was she affected, but she described the whole practice as having low morale:

> at the moment, because morale is low at our practice, it makes me feel more disconnected so I just feel like just showing up, going straight to my room, just seeing my patients and getting out of there, whereas when we felt more connected, I guess I felt more inclined to hang around for a little bit at the end of my session and pop into someone else's room for a chat, whereas now I just – now that I feel less connected, it's more like, no, I just want to get out of here and go home or whatever, or go to whatever I've got on in the afternoon and I guess I feel ... feeling disconnected, I feel less inclined to want to do more for the practice so I feel less likely to offer to do extra days if they're short because it's like, well, you know.
>
> AAC5 (F age 34) Lines 746-757

AACC (M age 63) observed "the other guy" in his discussion regarding quality in practice. Even though he discussed isolation as being a risk factor for quality practice, he mentioned another GP who was relatively isolated but also one of the "better doctors". He commented that there were both positives and negatives with his clinic now being larger compared to when it was a smaller clinic and there was more personal interaction:

> You're in your room seeing patients by yourself and people can be quite lonely. Some of them are less outgoing and sociable than others, and they just lurk in their rooms a fair bit anyway. There's one of the doctors who I happened to know from doing quite a bit of auditing in the practice, actually one of the better doctors. But he does not get involved in any other activities whatsoever apart from seeing his patients, which is interesting.
>
> AACC (M age 63) Line 51-58

AACG (M age 55) described with great passion his desire for a homogenous culturally functioning practice, yet had also struggled with a recent merger from a small to a large practice. He was now encountering a very "different" practitioner based on values and patient throughput. AACG was idealising the concept of peer interaction in terms of GP health and quality practice. He suggested that "any interaction was a good interaction" and yet this "other GP" was frequently revisited during the interview as someone whom he "would pass and not bother with":

> And there are different grades of how good that is … there are some people you would pass and not bother with cos [sic] their philosophy, their drivers are completely foreign to mine and there certainly is one such person in our practice that I shouldn't talk … that I … I shouldn't … cos [sic] we are very different … he is about the bottom dollar and I would like to get the bottom dollar – but I want it to be a successful practice for everybody and so the practice as a whole is successful and so it's that whole, you know … um …

> AACG (M age 55) Lines 224-232

From the disconfirming group, BBGB (F age 51) talked about her chronic illness and how the frequent hospitalisations contributed to her isolation in many ways, not just at work, whereas she also talked about her specific networks and particular GP peers – she had been recommended as someone who was not obviously involved in peer connection or GP-to-GP interaction. Yet BBGB coherently described her interactions within her practice and the way she sometimes lacked confidence approaching more "senior" colleagues. She described not wanting to go to large conferences for the risk of isolation and how important peer connection was for her, describing it as work-based facilitation; for example, (Line 205): "as an education value and also a person value". She rated connection highly despite having been nominated by colleagues as a supposed disconfirming example of peer connection. BBGB attended external educational meetings together with another GP known to her:

> It's funny really, isn't it, because I live alone. But that's not necessarily by choice, a lot of that has been through my illness. But I don't like being alone, I'm a people person, I like chatting to people, I'm a very social person.

> BBGB (F age 51) Lines 214-217

Illness came up again, this time with BBSB (M age 61) from the disconfirming group. He related a narrative of another GP, "Dr X", and the effect on BBSB's wife, also a GP in Dr X's much smaller practice. Dr's X's wife's illness made him unavailable for any other connection. There was a cost with peer connecting of emotional labour, which was not overtly acknowledged but which in this case appeared to have respectfully limited any peer-connected activities:

> My wife works in a … just is in a (small) doctor practice. I think her opportunities would be less. Because they're both very busy. This guy has his own problems; his wife's got (ill). So, she would have less to do … be able to unburden. But I think, for me, I could. Yeah.
>
> BBSB (M age 61) Lines 219-224

BBJE (F age 41) was the only other GP in the whole sample who related how her chronic illness and food allergy made it difficult for her to build relationships in practice, as well as suggesting she was (Line 52): "a fulltime mum with a part-time job" and so she couldn't even go into the staffroom at lunchtime due to cross-contamination concerns:

> So they do sort of dinners and stuff and also I'm [allergic] so I can't eat out, which limits it. My family hates it too because I can't eat out, I've got about three places.
>
> BBJE (F age 41) Lines 53-55

Other attributes of this sub-theme include the "other guy" first-level code, being another, often hypothetical GP who was "not like" the participant GP. This othering was non-specific and, according to participants, related to practice values, personality and/or style. It was a projected image often onto an unknown GP that reflected qualities that were rejected by the participant GP. There was a lot of disdain, judgement and implied moral criticism about this type of GP. Here BBSB (M age 61) explained how not missing patients' affective data by (by another, theoretical GP) was important in diagnosis within general practice:

> BBSB (M age 61) Line 717-729: If you're empathic, I think that it does take a little bit longer in the consultations. So if you do want to churn them through, some doctors do that. They're not going to want to be empathic because…
> KP: But you're saying it's better for general practice to be?
> BBSB: Very much so. Yeah.
> KP: Why is that?

BBSB: I think that – I think that it's almost as important as clinical knowledge, having empathy. Because it is how someone thinks and how someone reacts – knowing how they react … it's all part of knowing what's wrong and how they're going to react to it and what to do. I think that's just as important as the clinical knowledge – you know, being able to diagnose something.

AAD2 (F age 51) illustrated that the "other guy" used power and hierarchy in a way that caused her to leave practice. This is a specific and not a theoretical illustration of the "other guy" first-level coding that simultaneously contains elements of values, personality and practice style clash. She also discussed how this impacted another GP, causing him to leave the same practice. Her discussion around this issue included the fee-for-service model and the need to structure appointments as short and frequent rather than long and complex. AAD2 discussed how the structural forces of the billing system had corrupted other GPs' practices and even though she was in a bulk-billing environment herself, she talked about the theoretical bulk-billing practices as the epitome of the "other guy". The scathing nature of this "not me" component of the dialogue was consistent with many other participants:

> I've been told in a practice that I'm the junior and I will do what I'm told. That didn't really work so well and I left that practice. That was all power games and who is in charge and I'm going to be the boss.
>
> AAD2 (F age 51) Lines 337-330

So the peer-connected dialogue in a negative sense is reported as being important within these excerpts to staying in a particular practice and it is still within the intersubjective space of the peer-connected hive mind and the GP dialogues. The dialogue with the "other guy" is present but it has this othering and distasteful dimension that came up frequently for most participants:

> I mean, there was a doctor there that was not my employer who I thought was a lovely guy. And he got harassed like I did because he also ran late and you know, but he was compassionate and we used to chat about things a bit. But he left before I left.
>
> AAD2 (F age 51) Lines 993-996

Other commentary included those GPs who had left traditional general practice without being able to solve some of the problems that the general practice workplace presented. The following quote

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illustrates how a peer-connected learning experience failed to keep a GP in traditional practice and how this created a form of "other guy" dialogue. This was spoken about with a degree of sadness about two GPs who had left practice and AAFM (M age 58) felt both GPs had suffered an inability to manage workplace-based problems, especially affective problems, of general practice:

> By being so open to patients and so understanding and so empathetic for them that he sort of left himself vulnerable.
>
> AAFM (M age 58) Line 795

AAFM's interpretation of these doctors' empathy was as a condition without boundaries and this was, in his opinion, a liability for practice:

> She said to me, "The reason I'm leaving general practice is I want to deal with people with a finite problem. I'm happy to deal with people dying, people in nursing homes. I don't want all these young girls with anorexia and I don't want …" and she was collecting patients with chronic mental health problems that somehow identified with her and they became a real burden for her. I tried to work with her about that sort of thing, but she decided the best solution for her was not to work in general practice.
>
> AAAFM (M age 58) Lines 811-819

AAFM also indicated the influence of competition for patients and lack of (government structure) for local divisions of practice as contributing to a negative peer dialogue with the "other guy" GP, which he also expressed with an element of sadness:

> We talked briefly about, like, we share a couple of patients, but it was like we were competitors fighting for the same patients. I just felt that's really sad.
>
> AAFM (M age 58) Lines 1103-1106

In summary, this sub-theme has elements of needing congruent safety in the intersubjective space. However, other elements contribute to a negative dialogue. These include the influence of funding, incongruent personality issues, gender, emotional factors and practice types. Other factors involved could be personal feelings of the observing GP or outright disagreement with the observed GP. In the case of illness, this was an exception where the illness created some degree of isolation. It was hard to know whether this had any causal direction as there appeared to be

observed othering behaviour and personally referenced othering behaviour as well as the influence of the illness itself as it contributed to an out-of-line experience. The strength of emotion observed by me during the interviews regarding this negative peer dialogue suggests the importance of this sub-theme. All participants contributed to the substance of this sub-theme. Consistently, there was a negative judgement from degrees of distaste through to sadness regarding the out-of-line peer dialogue.

5.6.4 Disconfirming results for the peer-connected hive mind and the GP dialogues

The only consistent first-level code that related *only* to the disconfirming group in this theme is "illness". This contributes to the overall story of the out-of-line sub-theme and is a part of the larger overall theme "the peer-connected hive mind and the GP dialogues". Illness was coded only for three participants and, whilst unique and interesting, it is a part of the whole story of GP peer-connected experience. There is a suggestion of stigmatisation that is worthy of follow up.

Overall, the "peer-connected hive mind and the GP dialogues" theme captures relationships ranging from the largely positive everyday practice of mind-lines to the deeper and more protected heart-lines, as well as the negative dialogue of the out-of-line peer interactions. They are related and cluster together, but are separated due to the descriptions of the participants defining them and interacting within these dialogues in different manners and for different purposes at different times. It remained a constant observation by participants that mind-lines are a sign of good-quality practice but was less recognised that these peer connections create an environment for the more protected intersubjective dialogue called heart-lines.

Here AAWM (M age 40) harkened back to the accepted medical practice of "genuine" mind-lines, thus somewhat defending and protecting the "just offloading" heart-line interpersonal dynamic and legitimising the practice and himself. Furthermore, his observation was that his network just "fell into line" even though he also described those within his medical practice with whom this was not

the case. This observation in my own education networks pre-PhD was one of the principal reasons for my study.

> It's not just about discussion and offloading, it's genuine discussion about clinical cases, really looking at opportunities for looking at the evidence base behind it and to challenge some of the ideas. You get all kinds of answers. Sometimes unexpected, but yet I think that's the beauty of the whole thing. It polices itself. Everybody just – something like here, people just naturally police themselves. I think if you're on the same wavelength, people naturally do that. There will be people who will do certain things or say certain things, but they just fall into line.
>
> AAWM (M age 40) Lines 337-346

5.6.5 Conclusion on theme 2

These findings contain the interpreted theme of this research called "the peer-connected hive mind and the GP dialogues". This is another large theme with overlapping sub-themes, but all contained within the intersubjective relationship between GP peers. The peer-connected hive mind contains a story within a story and is considered a theme of definable substance. It contains the central characteristics of peer connection as a concept.

The final theme encapsulates an interpreted process using more humanistic theory, whereas the stories of the first and the second themes contain more pragmatic influence. This final theme is called "resourceful self-efficacy as a sustaining practice and the good GP".

5.7.0 THEME 3: RESOURCEFUL SELF-EFFICACY AS A SUSTAINING PRACTICE AND THE GOOD GP

This theme completes the story of the research findings. This theme collected around the participants' description that they had efficacy in their jobs in utilising peer-connected relationships to access knowledge networks and that they were not alone in decision- or sense-making. *Because* they had a network to rely upon, they could keep going in practice. This network of peers reflected back to them that they were a "good GP". This theme is a part of the whole story but equally stands alone.

Figure 5.4 illustrates this theme building. The approach retains its flexible constructivism. The reflexive theme building follows. Professional identity and pride was a significant contributor to this theme.

Figure 5.4. Theme 3 components
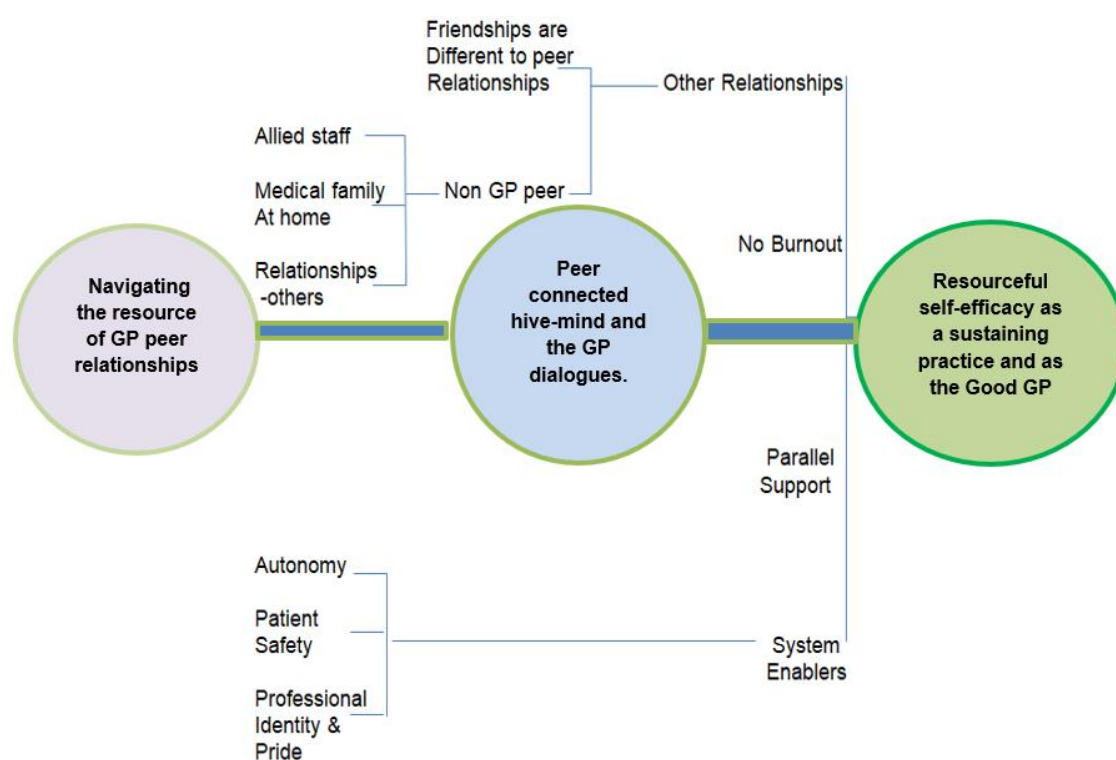
This theme is seen in this example quote from a participant GP and practice owner, AAH2 (F age 52), who described issues of practice including isolation, the weight of full responsibility, avoidance of making mistakes and the uncertainty of "not knowing". She implied that the loyalty and efficacy of her practice also enabled the self-efficacy of her doctors as individuals. According to AAH2, they

could "help" each other, they could "listen" to each other in a witnessing way and they could actively "support" each other in a deeper experience. AAH2 described cultivating a culture of peer-connected experience that supported resourceful self-efficacy and thus actualised the attributes of identity as the "good" GP. That relational capacity contributed to a resilient network based on relationships for all the doctors in her practice via the deliberate culture of facilitation. AAH2 suggested peer connections contributed to her staff being "loyal" as most work-based problems could be handled within the network of affiliated relationships. So the cognitive demands (knowing and clinical knowledge) and the affective demands (isolation, active help, witnessing, support) could be met easily in the clinic when needed. Enabling GP peer connection meant making varied resources available to support relationships. In her words, the consequence was people "like working" at her clinic. Both the practice of AAH2 and the individual GPs' practices became sustainable:

> I think everyone feels lonely in general practice because it's you and the patient and an enormous responsibility, weight of responsibility of getting it right and I think that being able to acknowledge and share that, and to be able to say, "Look, I don't know". It's all very well to say "I don't know" but you can say "I can find out". So, I think, yeah, that's one of the reasons why we have such great loyalty among our doctors and people like working here, I think, is because I think we have that idea that that is part of our job is to help each other … to listen to each other … and to support each other and everyone does it.
>
> AAH2 (F age 52) Lines 220-229

There was an aspiration to the greater good and the peer-connected relationships contributed to doing the GP work well in both the clinical and the personal senses. She went on to explain later in the interview about the aspiration and integration of affiliative relationships into "good" clinical practice:

> AAH2 (F age 52) Lines 832-834: Yeah, it is compassion, it's treating people with compassion in the workplace as colleagues, but also it has a benefit for the greater good because the patients actually benefit from it.
> Lines 842-845: And you can actually do your work better and then if you're having trouble doing your work you've got someone who you can talk to about it because that's a big part of life.

Hence this resourceful and sustaining practice theme builds upon the previous themes as part of the story. Its attributes include aspirational and cultural motivators, other relationships, the management of burnout and the contribution of a relationship-based peer-connected resource

Managing systemic influences on GP sustainability: The contribution of the systems and medical culture to this theme consists of the participant GPs' stated aspirational desires for patient safety and physician autonomy whilst developing a sense of professional pride and identity. Many talked around aspects of professional pride and identity, most talked about professional autonomy, but patient safety was a unanimous aspiration. These aspirational attributes include maintaining an autonomous decision-making capacity, a safe and supported self-image, and participants overall seeing themselves consequentially as a good GP.

Professional identity and pride: Everyone talked about being self-efficacious and being a good GP; however, a few talked more specifically about professional pride and identity. This aspirational quality for sustainability (to keep going) as an identity was negotiated in relation to the systemic enablers of culture. The peer-connected experience led to a pride in work.

In the following excerpt, AAWA (F age 38) indicated that managing the cognitive and affective needs of practice meant she was "not doing the job" without peer connection. This underlying need was about sustainability of her professional pride for her. AAWA described poor sustainability if she was in a peer-disconnected environment, which she defined as solo practice. Immediately she framed this sustainability in terms of the GP peer dialogues she had established. The impact of the theoretical absence was a part of her not choosing solo practice and even more so of not being able to "do the job". Her belief in her identity directly related to the reflections and resources from the peer relationships she had established. The loss of reflected identity through not having access to the peer network changed her ability to work sustainably:

> Yeah, definitely. I couldn't do the job if I was – I mean, I've never worked as a solo GP but I think I don't know how I would do that … Again it's the informal stuff, it's the, like, "Hey can you look at this and just tell me what you think" … just little things like that. But also being able to say, "I've got a really crummy situation and I really need to tell somebody about this" and just have a cry in the tearoom. How do you do that if you don't have anyone around?

AAWA (F age 38) Lines 610-622

The next excerpt similarly discusses the facilitative aspects of peer relationships as a sustainability factor. The use of the "other guy" attribute to contrast and bounce against the self at work is suggestive of identity issues being involved in the formulation of the good versus bad GP dichotomy that the participants frequently discussed. AAYU (M age 62) was a GP practice owner and talked about knowing that peer connections help with sustainability at an "instinctive" level. He denied that connection is "unconscious" when I asked him if this relationship facilitation was unconscious or subconscious. He corrected me to use the word "instinctive". In other words, GPs knew the peer-connected relationships were important, but it was not talked about, as he indicated. The context of this is AAYU had earlier discussed practices he had left early on in his career where a cohesive peer culture was not in evidence. He described peer connection as:

The oil that keeps you running. Line 911 AAYU (M age 62)

He went on to explain more about what he meant and particularly the implication of being "lesser doctors" without the many aspects of the peer dialogues. He suggested a connected network of peers contributed to "enjoyment" and "management of patients" at work, which created a sense of professional pride that was opposite to "lesser doctors". In other words, not being a "lesser doctor" was a sustainable identity and therefore made a sustainable workplace for him:

AAYU (M age 62), Lines 913-924: Yeah and it's sort of under the surface, but it's very important to keeping you comfortable, to making things run within the practice and within the management of your patients. I think without it, I think we would be lesser doctors than what we could be.

KP: So it's almost a subconscious thing, it's below a level of consciousness yet we look for it?

AAYU: It's instinctual and I think we don't take it for granted, because we all love it when we've got it available. When we haven't got it, we think, "Oh what a pity, I don't enjoy what I'm doing!" … But sometimes we don't enunciate the fact that it's that networking, that peer connection that is important. It's more that I hate that guy, he's just, you know, becomes…

The identity issues and being a good GP were persistent across the dataset even within the disconfirming group. In the next quote, BBSB (M age 61) explained that peer connection assisted

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him with his personal and educational development. This enabled a sense of professional pride to "develop". He indicated that a stagnated practitioner with no connection was not performing to their fullest actualised potential, nor was it survivable. The idea that there is a personal and professional development outcome from peer connection was stated by BBSB:

> I think you would not survive being too isolated. I think you cut yourself off, you stagnate. You don't develop. Both as a person and educationally. So I think you do need … you can't be isolated. As a practitioner. Yeah.
>
> BBSB (M age 61) Line 905-908

The desire to have pride in one's work and the validation of that identity were important even to the most disconfirming participant in the sample. BBUF (M age 59) described his need to feel as if he was doing "a good job". For the most part BBUF used repeat patient attendance and high-volume, high-earning practice as his indication he was doing a good job. This meant his professional pride was protected with his very busy practice as his measure. He reflected upon his own work in this way:

> If something happens to the patients. I get upset if I do something wrong, if I feel that there's a part of whatever happens, I didn't do a good job. Then I get upset.
>
> BBUF (M age 59) Line 424 -426

Further, within the disconfirming group BBAE (M age 61) talked about his commitment to being the best version of himself as a GP and how this idealism was his meaning and sustainability for work. Like many participants, he described the use of the peer-connected relationship for cognitive and clinical problems in practice. He described the relationship as needing to be without "tension or antagonism". With tension and antagonism in the relationships, the access to the resources the relationships provided was threatened. His professional pride depended upon access to those resources:

> To make sure that you are giving the best service to your client, you need to be well-educated, you need to be well-equipped with the latest information and the things going on in the practice, otherwise you are falling behind to give the proper and up-to-date service to your clients.

His description of the affective needs of general practice consultations or around peer-connected relationships seemed very limited. It may be a consideration that this affective language lack contributed to his nomination as a disconfirming peer or there may have been a cultural issue related to his overseas training or gender or his English as a second language. This was noted at interview and subtle probes were given to try to elucidate further, without a clear response. Nevertheless, having pride in his work helped him be a "good GP" for his patients and this was a sustainable practice for him:

> I love patients, to see them. I took them as my mission, that I am solving somebody, sitting here to help somebody, it's my … not only a job, it is my mission, the profession, that I take it seriously.
>
> BBAE (M age 61) Line 390-392

This sense of mission and vocation combined for BBAE into a commitment to stay practising and, as the best means of this, staying on top of information and not having any "tension" which would inhibit him from enjoying work and approaching his peers for information.

This sense of self-efficacy is a constant across the data corpus although expressed differently. Some participants suggested they would leave practice without peer connection, others that it would impair their ability to enjoy work and others that it is essential to good and safe clinical practice. Safe clinical practice was universally an aspiration for all interviewed GPs. Yet other GPs found the language challenging. For many participants, having professional pride and maintaining their identity were important for staying within the workplace:

> I am committed to be, as long as I can practise, I want to be the best one, to the best I can, to myself, and to offer to my patients.
>
> BBAE (M age 61) Line 407-408

However, a few achieved the sustainable good GP identity in different ways. BBGQ (M age 65), a practice owner, still felt medically efficacious with his use of internet technology and saw peer connection as not being connected with his sustainability. As one of two participants not describing

a need for peer connection, this is somewhat contradictory regarding his earlier statements that the young doctors helped him keep up to date and that peer connection is essential (Line 215): "Yes, I think it's part of sharpening the practice". Notably, BBGQ's "role-model", the "idealised good GP", whom he might see once a year, provided inspiration for him regarding positivity. He described this specific person as a peer-connected relationship. It is interesting that BBGQ denied peer connection at the same time as he reported using it. This was difficult to interpret and perhaps it might be that peer connection was not a priority for him even as he knew it was useful. As previously described, BBGQ found particular meaningfulness within his spirituality. For him peer connection was not essential to his sense of professional identity or pride. His identity was quite separate to any peer connection and indeed not much to do with general practice at all:

> I don't think about myself as a doctor, but as a computer programmer. It could be good, it could be bad.
> BBGQ Lines 345-346

And later in the interview, despite having suggested that connecting up with younger colleagues was a good aspiration and his role model was a good inspiration, he commented as follows after my question:

> KP (Line 636-640): Do you have any issues yourself with managing keeping up with general practice clinical information, do you think there is anything in peer connection that helps you?
> BBGQ (M age 65): No. I think nowadays with the internet, we can search it on the internet. Wikipedia will give you the most up-to-date information.

Yet BBGQ earlier had defined peer connection in the way illustrated below, which was consistent both with his values and with his retelling about his inspiring role model GP peer. It seems that he felt peer connection was important for work enjoyment although he himself did not "need" it. If anything, it was the affective need of "other GPs" in practice to be able to build a sense of their efficacy in good practice by inspiring others. I interpreted this to be his aspiration for general practice that he rarely saw and when he did it was inspiring for him. I explored this a little with him, noting the contradictions at the time of interview:

BBGQ (M age 65) Line 628-635: Yes. Peer connection is storytelling amongst a group of doctors, learning from the stories we have to tell each other. Preferably they are positive stories, good stories, not someone whingeing and telling bad stories, and dragging the mood down. Good stories. Good stories that reinforce good practice. To me, that is peer connection.

KP: And that helps with what parts of practice?

BBGQ: More in building resilience, building on enjoyment of general practice, building of wisdom and good behaviour.

BBGQ in this regard did seem to be a mostly disconfirming GP, identifying more in his own words with computer programming than medicine. He demonstrated resilience and self-efficacy through his resources of the internet and his spirituality. His inspiration, however, on the other hand came from some peers, particularly those who were positive about practice. He felt this was an important part of building other GPs' resilience and identity. He did not reflect that this was a form of peer connection. He did not reflect upon his own needs in this regard even as he described them.

Autonomy: Participant AAOO (F age 39) suggested that her sustainability was linked to her peer-connected networks. On reflection AAOO declared an underestimation of the effect of the peer-network benefits. Contributing to this maintaining of her networks was her ability to resource these herself through exhibiting independent autonomy of practice location. This occurred when she experienced the lack of an affirming peer network and described how this might have risked her leaving medicine altogether. She changed practices, which helped her find a network of peers she could share with, and thus she felt she could go on with general practice. This autonomy to direct her own work contributed to her sustainability:

I would have to say it is probably, it's right up there, I think it's nine out of ten. I went from probably being in a position when I was thinking, oh gosh, I don't want to do medicine anymore, to now actually really enjoying it and loving my job, and I think that's just the difference in terms of the group of people that I'm working with and the environment. The patients, [they're] the same. So it just makes a huge difference and I think I probably underestimated the difference that it did make.

AAOO (F age 39) Lines 225-232

AAVA (M age 54) in a rural location similarly controlled his work environment to suit his practice style. The ability to control and direct their work in a professionally autonomous sense seemed to offer great protection to many participants in managing their long-term sustainability in practice. Some of this was to do with maintaining professional peer-connected networks and some of it was just about a boundary:

> When I started here twenty-one years ago, when we were busy and there was a tendency for the office manager to squeeze in extra patients here and there, and it had been accepted by some of the others, and I put my foot down. And said I reckon I've got a finite number of GP consultations in my system, I can either use them all up in the next five years and then never ever want to see a patient as long as I live, or I can space them out and have a happy career in general practice over the next so long.
>
> AAVA (M age 54) Lines 704-711

Even though AAVA never described having burnout, he was conscious of the management of it and had designed his practice in such a way to limit his exposure to the risk of burnout. This contributed to his self-image as a good GP who was also a sustainable GP.

Patient safety: To illustrate further the depth of use with peer connections, AAS7 (M age 39), a practice owner, suggested directly that peer connection was important to the sustainability of his business. This was due to peer connection providing a solution to the aspiration of "patient safety". He described how "talking doctors" contributed to the sustainability of his entire practice by being safe GPs. AAS7 as a practice owner recognised the importance of peer relationships and actively employed GPs who could maintain reflective, dialogue-driven peer relationships. This was echoed in others' descriptions of other practice owners being very particular about the type of GP they would employ in terms of standards but also personal reasons. Primarily this was framed as a patient safety issue, but it included more subtle aspects of professional pride and identity. By choosing who would be working in the clinic, AAS7 was able to maintain those systemic enablers (autonomy, patient safety and professional identity/pride) of resourceful self-efficacy as a sustaining practice. Many of these systemic aspirations were facilitated and expressed through peer-connected experiences:

So I don't want a doctor in my practice that doesn't want to talk. I think that would worry me. It's part of my recruitment drive that they do actually open themselves up for observation because I think that that's a sign of a good clinician. Somebody that's able to talk, that will talk, about their treatment and management is a sign of a better clinician than somebody that doesn't … So, yeah, part of the business longevity and safety and clinical governance. And then the other part, it's just a more rewarding environment. That's my personality – as I said, I like to talk. I won't bring on doctors that don't want to talk.

AAS7 (M age 39) Lines 895-906

Overall, there was a great aspiration to the systemic enablers of peer connection. For all participants, patient safety was of great importance. Autonomy was essential to many to sustain themselves in their particular resourceful and adaptive ways. Professional pride was important to many and contributed to the overall story of resourceful self-efficacy.

Managing sustainability with other relationships: Further attributes of this theme include the practice of utilising other non-GP peer relationships. These relationships were described as part of the drive to self-efficacy and to resilient and resourceful selfhood. They included relationships with practice staff, nurses and allied health, and the resource of having a medical partner or family member. These relationships were sometimes challenging due to the unexplainable nature of GP work. These other relationships often appeared to substitute for GP-to-GP peer-connected experiences, although this was not for every experience or need. This was challenging to interpret as there appeared to be pros and cons in having other people around the GP who supported them in practice. Sometimes this was seen as positive and refreshing, but equally people outside of general practice generally did not understand the demands of the workplace. Generally a non-GP peer connection was for minor issues and in place of ready access to a trusted GP peer. Unique to the disconfirming group, sometimes just having other GPs around them in a type of parallel experience with minimal relational interaction was described as a resourceful part of sustainable practice.

Firstly, the pros of peer-connected relationships were discussed by BBRZ (F age 41) as consisting of the need to understand the workplace:

Yeah, probably. Talk a lot about a lot of things but yeah, work would be one dominant thing because I think people outside the field, you talk about work they immediately assume the patient's perspective in that conversation and it's really good to have people who understand the other side of that as the worker, the GP.

BBRZ (F age 41) Lines 140-144

Secondly, later in the interview BBRZ described the cons of utilising some peer connections and disclosures as being difficult due to stigma and the possibility of negative reporting when discussing more challenging aspects of practice with GP peers:

But if I was honest, if I was having a personal crisis outside of work, although they're friends they're maybe not the friends that I would turn to about those things because, well, they're kind of newer and more superficial-level friendships, but also because of that trepidation that exists around full disclosure of personal matters that could in some way come back to your workplace and have a negative influence somehow there.

BBRZ (F age 41) Lines 199-205

Medical marriages or family at home was also important and it appeared to be for the deeper parts of peer engagement due to the level of trust. However, again there were caveats if the partner was not a GP, which was difficult due to a lack of GP workplace understanding:

Yeah, I mean, for me the things that have kept me going are having a partner that is, you know, is completely, you know, across the table, totally understands it, the medical world, cause he is medical [GP] so you know, boy … how lucky am I?

AAMV (F age 54) Lines 661-663

Then again, the paradigm of GP culture was still necessary to understanding despite having a medical partner and was a consideration:

I've got a medical partner. My husband is [non-GP] medical and so he cops a lot of that, but it is nice when you have it in a GP environment, so someone that's actually a GP working in a similar environment.

AAVX (F age 39) Lines 166-169

<u>Managing sustainability using parallel support</u>: The next attribute of connected relationships was what I called "parallel support". Parallel support is a presence without any dialogue and I included this as a more passive form of support. Notably, this was only coded within the disconfirming group and for very few participants. As a unique aspect of the description of a peer-connected practice that contributed to a sense of self-efficacy that sustained the GP, it was perhaps the most passive attribute of the GP relational experiences.

Parallel support was another and alternative strategy to seeking peer-connected knowledge. GPs had the sense that this checking and reassurance were available even if they were not used. This constituted what I coded as "parallel support". It is a silent, more passive form of feeling connected that is not very visible. BBJE (F age 41) described how peer connection even as a "parallel support" helped her in practice and that without it, as an isolated practitioner on a "Sunday afternoon" she lost her sense of "enjoyment" at work. This need for parallel support may be invisible to other GPs and might explain why she was nominated as a disconfirming GP. Consistent with many participants, BBJE described bouncing ideas off another peer or just seeking some minimal reassurance that existing knowledge or management of a case was current. Parallel support was important as a "backup" for a few participants. Parallel support indicated awareness and a desire that there were GP peers on hand even if the GP never reached out for help or assistance. The "theoretical backup", as BBJE described this part of sustainable practice, was important:

> I would find it very isolating. Also, I don't ... the whole business thing ... no! And not having anyone to bounce ideas off, not having the backup, even if it's in theory. I think my confidence is a lot better when there's someone there. I don't like – we used to do Sunday afternoons and you'd be there on your own, and I did not enjoy that at all.
>
> BBJE (F age 41) Line162-163

BBSB (M age 61) described his sustainability as having a sense of value applied to him in the workplace by his peers. A sense of cooperation and teamwork contributed to the enjoyment of work. Some of this overlaps with parallel support, but it also was interpreted to be a form of validation from peers that contributed to a feeling of being validated as efficacious. In general,

BBSB described that he did not interact with his peers but enjoyed having them around. Yet on probing, he did reflect later that his informal contacts were perhaps more than passive connections for work-based functions:

> I think you feel good. I think it's like any workplace; if you're happy at work and you think you're being – you're being treated well, then you will put in that little bit extra. If someone says, look, I can't work Tuesday night. Can you work it for me? I'll say, yeah, I remember you worked one Monday a few months ago. Of course, I will do that. And if you feel valued and you feel a connection with the other doctors, then you're going to … it's more enjoyable to go to work.
>
> BBSB (M age 61) Line 513-520

So rather than discrete and neat categories, there are a range of experiences of peer connection, notably nearly all contributing to feeling sustainable and reflecting that they are participating in a practice that supports their "good GP" identity. Sustainable practice was contributed to by other attributes also.

Managing burnout as a resourceful, self-efficacious and sustainable practice: The experience of burnout was familiar to many of the participants, but not to all. Burnout was a state that most practitioners invested effort to avoid. The self-efficacy and sustainability component consisted of successfully managing relationships to either prevent or identify burnout. Some participants reported they had experienced no burnout and described this as a sustainability issue using very individual and self-derived methods. The remaining participants discussed how they managed burnout using a variety of methods including peer-connected experiences. Some participants did not experience burnout and reflected upon this:

> I don't have any [burnout] yet, thank God. And I think that's because work is work and home is home.
>
> BBJE (F age 41) Lines 583-584

Yet this violated some of the medical culture according to some others as to the reality of clinical work. BBRZ (F age 41) described managing burnout prevention by taking on medical education roles and said this was especially true for women who needed a break from the emotional labour of

gendered consultations. In direct contrast to BBJE (F age 41) and many other GPs in this sample, BBRZ was cautious about GPs setting tight boundaries on medical practice. This might be judged as not being a "good GP". Burnout was a threat to sustainability, but so was poor professional identity. Professional identity was threatened by setting boundaries on burnout. The following from BBRZ sits in conflict to BBJE's statement above. Managing self-efficacy appeared challenging:

> Yeah, I think there could be a degree of resentment build up if somebody is so boundaried so that they never allow the reality of clinical practice to infringe upon their desire.
>
> BBRZ (F age 41) Lines 800-802

All participants spoke about their ability to stay in practice with few exceptions and many related this to a positive relational peer-connected experience. There was some complexity to this as quite a few of the participants did not report any self-identified burnout despite recognising burnout as a threat and implementing preventive practices. Burnout and its recognition challenged that sustainability and the good GP identity. To illustrate this, AAOK (F age 35) emphasised the early preventive burnout aspects of peer connection as a part of sustainability practice. Quite a few participants mentioned the positive aspects of having a peer tell them to take some time off or ask if they were going along well from a psychological perspective. However, in a conflicted sense even having the aspirations of "sustainability and the good GP" identity could take a toll on the GPs. AAOK suggested the high demands of medicine in general produce highly "coping" people who are ironically neither too reflective nor able to admit they might have a health problem. According to AAOK, being seen to be efficacious and "in charge" and "not failing" is a part of the embedded medical culture. In a peer-connected network, according to many participants, sharing of vulnerability, stories of coping and peer visibility might contribute to individual and group resilience. This excerpt illustrates the recognition by peers of problems and vulnerability which can include burnout:

> I think doctors are terrible at it [accessing formal support]. I don't think doctors like to admit when they're the patient or when something's going wrong for them. I think doctors are generally type A personalities and they're so used to firstly coping and secondly being the one who's in charge or being the one who had to not fail at anything and do well. But when they're not doing so well I don't think it works very well for them and I don't think they

access care as easily, I don't think they admit that there's a problem, I don't think they like being the patient. So perhaps having these systems of connections in place actually prevents some of these people slipping into it [burnout], it can help people early on.

AAOK (F age 35) Lines 565-575

AAOK elaborated further on the cognitive and affective knowledge demands of general practice and the nature of emotional "giving". AAOK again broadened the facilitative roles of peer-connected relationship in this regard to political and system knowledge, as well as clinical knowledge, as a way of feeling efficacious within a very "hard job". Developing a sense of efficacy through peers is one way to manage some of those day-to-day demands. Many participants echoed similar statements to these as part of a complex approach to seeing themselves reflected in an effective work practice. The emotional exhaustion as well as the efficacy components of burnout seemed restored in a resource-rich and reciprocal way by peer connection:

You can't do it isolated, I think it's virtually impossible. You'll be a terrible doctor first of all, how would you learn things, and I think you need that just to know what's going on around you both in terms of the profession and where it's going and in terms of latest treatments. It also just keeps you sane, it is such a hard job with so many people coming to you all the time and I think each time somebody comes to you, it's like a little bit of your energy is personally given away to them and somehow you need to balance that out, get your energy back a little bit.

AAOK (F age 35), Lines 565-575

As well as the described impact of peer-connected experiences, it appeared to be a real juggle maintaining a sense of self efficacy. By also managing burnout, using other relationships if you had to or even at the very least having some peer-related parallel support, all these attributes contributed to the GP continuing to be the "good GP" and were resources for a sustainable practice.

5.7.1 Surprising findings within this theme

The surprising findings of this theme include again that the disconfirming group of GP participants were not as always disconfirming as was initially suggested. There were, however, disconfirming aspects and this occurred with some of the GPs in the first data collection as well as in the second

data collection. There was much greater nuance within the data corpus than a simple and clean differentiation between the groups as confirming or disconfirming participants.

The other surprising issue was the at times reliance on other non-GP practice staff for aspects of debriefing and support, and how much this contributed to sustainability of the practice overall. Despite this study's focus being purely on the relationships with other GP peers, this aspect of practice was talked about by many participants. There was a large, nearly unanimous, preference for another GP overall, however.

Further interesting framings occurred around the universality of the "good GP" image in terms of individually assessed self-efficacy, where some in the disconfirming group had been referred for "not belonging" in that group of the "good GP" by their peers. Yet the results indicated they put themselves in the good GP group.

The diversity of the peer-connection relationships within the findings is also surprising. It was not always obvious that the connections included the wider community of GPs and were not always sourced within a practice. The various levels of connection provided a rich layering of resources for work and a scaffolding of feeling connected and supported. Other surprising results include that particularly some of the male participants were not initially aware of positive affiliative relationships as being a part of their sustainable work practice. It is a surprising finding that the two most disconfirming (older male) GPs used relationships for practice needs, yet paradoxically reported that they did not need them. It is also interesting that both those participants spoke very proficient English but did not have English as a first language. Yet other GPs were able to describe the sustainable nature of peer relationships despite having English as their second language and having limited vocabulary associated with relational and affective language.

I was surprised that some of the disconfirming participants had been recommended as not having a large interest in peer connection when they often stated the opposite. There was much to reflect upon with that paradoxical framing by one group of GPs towards another peer.

5.7.2 Conclusion on theme 3

A summary of this theme and the story of the research through the words of the participants follows:

> Well, I think that it's multifaceted, like, it serves multiple purposes; it's the same professional learning and development, and safety around clinical care. And then I also think it serves a personal purpose in, for me, making work an enjoyable experience and an experience that I feel confident going into. Yeah, helps me feel like I can do my job well, so both because of professional aspects like I know my stuff and I know when I don't know my stuff, but I also just feel happy about being at work and I feel in a good place mentally, so like you were saying in terms of empathy and burnout and all of that kind of thing, so feeling like I'm in a safe, supported environment. I think they're the purposes that it serves.

> AAWA (F age 38), Lines 944-954

All participants contributed to this theme in terms of the aspiration for themselves of the archetype of the "good GP". For most participants including those in the disconfirming group, this was achievable by knowing they had a relational network as a resource for the work of general practice. However, a very few described this resource in terms of a passive parallel presence process and "knowing one wasn't alone", noting these participants were all in the disconfirming group.

Only a couple of participants discussed their sustainable practice and production of the story of themselves as the "good GP" as not being reliant upon GP dialogues or connections. One of these participants was using a spiritual dialogue for reflection. Yet this participant also contentiously described communicating with younger peers for up-to-date information and developing an aspirational mentoring role model for "happiness" at work. The other disconfirming peer described being able to be a solo GP, which was a unique statement within the data corpus. Yet he still participated in GP dialogues about clinical work. For that participant, there was much less talk regarding affective knowledge work other than being able to joke around with his peers as a form of work enjoyment. Both were males, both were older, both had English as a second language and both reported no need for peer connection even after some reflection within the interview.

Participants mostly talked about other allied health and reception staff as an "understudy" to the GP peer connections. These other relationships at times contributed social and emotional learning, as well as patient social context information for the GP's work. They also contributed to the GPs

feeling they were cared for within the practice and a few described the nurturing received when they themselves were unwell. Many suggested non-GP peer connection might happen as other GPs were unavailable often due to the constraints of daily practice. Medical marriages and medical family members also often assisted with access to the dimensions of peer connection, but this aspect again remained unacknowledged until reflected upon. There were also comments that other GPs were preferred if the family member was not a GP. In conclusion, it appears that the scaffolding nature of the relationships in various forms all contributed to the doctors staying in a resource-rich practice, with some surprising exceptions.

5.8.0 INTRIGUING FINDINGS OF THE ENTIRE DATASET

There were some first-level codes that I could fit into most themes but, interestingly, nowhere exclusively. These largely consisted of my reflections within the interviews and subsequent analysis of language and literacy. One of the codes referenced my observations that verbal literacy was lacking in relation to affective emotional vocabulary and language. Lack of general emotional literacy was observed in many but not all the participants. In general, literacy issues were more pronounced in the disconfirming group, although a lack of specifically emotional literacy was evenly spread throughout both groups. These findings were in the pauses, nonverbal cues and emotional coding, which are illustrated in Appendix 8, [Tables A8.1, A8.2, A8.3 and Figure A8.3] and which were observed during interview. This may be an interesting contribution to the overall story of the research findings and will be commented upon in the discussion.

This quote illustrates this hesitancy around emotional language some personality and style issues, but is not necessarily consistent with others nor with this participant's more senior leadership roles. He had some deep discomfort with this part of the interview. Consistently he and others had difficulty with words describing affect:

> AARL (M age 54) Lines 464-475: I'm a deeply introverted person who would feel very uncomfortable…
> KP: Sharing?
> AARL: Talking about feelings in a public place.
> KP: Okay, yes and yet in a practice or with your partner, you're able to…

> AARL: Yes.
>
> KP: …talk about that.
>
> AARL: Yes.
>
> KP: And that helps you?
>
> AARL: Yes.
>
> KP: Which you haven't thought about until now?

BBRZ (F age 41), who appeared insightful, articulate and descriptive, also initially used language around relationships in a limited way. The language of relationship was challenging and very often mechanistic terms were used:

> Peer connection? I suppose it means the ability to contact and have some sort of relationship with people in a similar situation professionally and to maintain relationships with colleagues, not just in the small private practice where you work, but in the larger GP community beyond that.
>
> BBRZ (F age 41) Lines 94-98

Later in the interview BBRZ acknowledged her own reflections upon other practitioners, which mirrored the findings in the data overall:

> I think so. I think there's different styles of different practitioners and some people shut down a lot of input from the patient around their psychology and they just make it all about their physical health and send them off to someone else if there's something above the neck to discuss.
>
> BBRZ (F age 41) Lines 233-237

This, therefore, is a series of interesting observations that were scattered amongst the participants and reflected in some of the descriptive challenges throughout the interviews even for some of the more reflective doctors. How these relate to the overall findings and discussion about relationships will be followed up in the final chapters.

5.9.0 CONCLUSION TO THE RESULTS

The themes together tell a story of the working world of Australian GPs. They tell this story through the lens of 29 working GPs and their relational-facilitated practices. The themes address the research questions including the roles of peer connection being sustainability in practice with

supportive knowledge and therapeutic functions. The Rogerian theory contributed using empathic theory of mind components, peer congruence in values and unconditional positive regard, the latter represented by a lack of judgement in deeper aspects of relational therapeutics. The context of general practice was complicated for entering into peer connection and has been described as the practitioners navigating all sorts of competing barriers and enablers at systemic, workplace, interpersonal and intrapersonal levels.

The GPs approached, consciously or not, the peer-connected relationship space for a variety of work purposes. Connection was achieved with various degrees of success and at various depths. By obtaining and participating in a large informal knowledge-management system, the GPs all considered they were resourceful and self-efficacious. The knowledge accessed could be clinical, vocational, political, social, psychological, reflective and therapeutic. As such, they preserved their "good GP" image, which contributed to sustainable practice. Peer connection went largely unrecognised and yet was the facilitation and "oil that keeps you running".

Chapter Five in review

Peer connection is a story with a beginning, a middle and an end.

The beginning is themed "navigating to the resource of GP peer relationships".

The middle is themed "inside the peer-connected hive mind and the GP dialogues".

The end is themed "resourceful self-efficacy as a sustaining practice and the good GP".

Each part of the story can stand alone but the data is best understood as a whole.

CHAPTER SIX: DISCUSSION

Peer connection has a story as told by participants about the relationships between GP peers. This is an untold story about peer relationships. The relationships are highly prized at the same time as paradoxically under-recognised. There is a complex dynamic showing the challenges of entering into the relationship. There are layers of structural and environmental supports that enable the relationship. These relationships support GPs in practice through clinical and affective knowledge acquisition. These relationships provide a reflected identity which sustains GPs to continue practice. These roles perform a function of informal supervision and debriefing. The relationships are autonomously determined and have informal stratifications of emotional depth. The discussion expands the themes and relates them to the research questions. The research questions are more formally addressed in the conclusions chapter. The roles of peer connection are discussed and situated within the literature. The theoretical psychology around relationship work is utilised and the results discussed within that framework. The many and varied contexts that enable such a relational peer resource to thrive or not are discussed. This is the first time an informal relational supervision network has been empirically described along with its establishment factors, roles and purposes.

6.1.0 INTRODUCTION

The purpose of this study was to explore the role of peer connection in the working lives of Australian GPs. What has been found suggests that a component of sustainability in practice is fuelled by the facilitative benefit of specific, affiliative, positive peer relationships. The research presented in this thesis illustrates how these relationships are more than a passive act or support process but an active, purposeful, positive web of informal relationships that assist with the work. GPs "keep going" and stay in the workplace, due to the mechanisms and multiples of resources provided by this complex social web of peer relationships. All but one participant said they could not work without peer connection.

The study establishes new knowledge which includes, firstly, that for some GPs there is an informal debriefing process that is very effective at recalibrating the sense of self. Secondly, the therapeutic alliance formed informally between GP peers can assist with the psychodynamic and therapeutic tolerance of the problems of practice. Thirdly, the study also contributes new knowledge regarding the culture of the GP workplace in supporting workplace learning, sustainability and performance. These multiple shifts are addressed often simultaneously within some unique therapeutic peer relationships.

There is not just one community of practice but many that are intersecting and interleaving and each has purpose in the workplace.(106, 129) However, relationships are often examined from an individual perspective, with recent research suggesting any network strength is related to the strength of relational dyads.(169) As individual as GPs' needs are, the network they purposefully resource is also a uniquely derived, informal, relational connection to support work practices. The research presented in this thesis has been more about that relationship between pairs and not about the network as much, although the network is acknowledged.

There was a very pragmatic approach taken by most of the GP-participants to quickly access a resource to support their very particular work practice. Whilst again much of community of practice and social network research looks at this construct in a mechanistic sense, this thesis has viewed them in relational and psychotherapeutic senses.(267) The relational focus has shown that the relationships and the outcomes are not an accident. Pragmatically, these results show, it is not just any GP with whom a GP might form a peer connection. Peer connected relationships are according to the participants, providing a range of essential aspects of practice without which GPs consider leaving.

Moving more deeply into the peer relationships utilises Rogerian theory and its construct more deeply. As detailed more explicitly in the methodology, I've used this framework for its dual applicability to both learning and therapeutic relationships. The Rogerian theory consists of empathy, congruence and unconditional positive regard.(4) As a humanist theory, this enabled me

to frame and describe the therapeutic and learning relationships between GPs working within community medicine.(48, 268)

For most GP-participants there was an acknowledged need to focus on the quality of therapeutic doctor–patient relationships within general practice paradigms of healing.(269) The methodology allowed the patient's humanity, and its role in the diagnosis and formulation of healing, to be reflected upon by the interviewed GPs. The GP-participants described the relational process of patient-centred work and alliance to be a series of GP-centred identity shifts, of problems, of anxieties, of emotional labour and of uncertainties, all contained within the confidential and at times solitary workplace. The thesis explores how the peer-connected alliance assists with the workplace and patient-centred therapeutic alliance.

The multiple purposes and roles of peer connection can be addressed simultaneously within some unique therapeutic peer relationships. Peer connection as such, assists with addressing the problems of practice, which are described as clinical knowledge management, affective knowledge management and sustainability.(12, 103, 270) There were other relationships which were not therapeutic but these were not described as a peer connected experience.

In keeping with this process of sustainable practice(s), some of the GP practice owners had deliberately created a relational space within their practices. Yet others, both participant practice owners and non-owners remained unaware, although incongruently appreciative, of peer connection. The process of getting to peer connection was described as "instinctive" and it appeared GP participants embraced this fully, partially or not at all. This finding is consistent with the literature that the process and outcomes of positive affiliative peer relationships are deeply appreciated and that the strength of that appreciation is expressed with surprise.(5) The study suggests new understandings of how resilient and resourceful GPs sustain themselves in a high-performance workplace.

Humanistic-Rogerian theoretical approaches show the work complexity as GPs transform and implement the positivist role of science into the human world of practice and simultaneously attempt to actualise themselves and their work practices.(52) The "yearning" to be the best version

of their professional self as the "good GP" was unanimous amongst the participants and peer connection was involved in that in most cases. The results suggest there is an overarching motivation for actualising of the GP ideals within the peer-connected world and when this is disrupted there are difficulties expressed as threats to practice and identity.

Each of the research questions have been addressed by the results. The movement of the research is a story from beginning a navigation towards possible connection (theme 1) to a middle phase of engagement and connection (theme 2) and its relational conclusion with outcomes (theme 3). An outline is illustrated in Figure 6.1.

Theme one. Navigating to the resource of peer connection

Theme two. The peer connected hive mind and the GP dialogues

Theme three. Resourceful self-efficacy as a sustaining practice and as the good GP

Navigation → Peer connection → Sustainability

It doesn't always work.
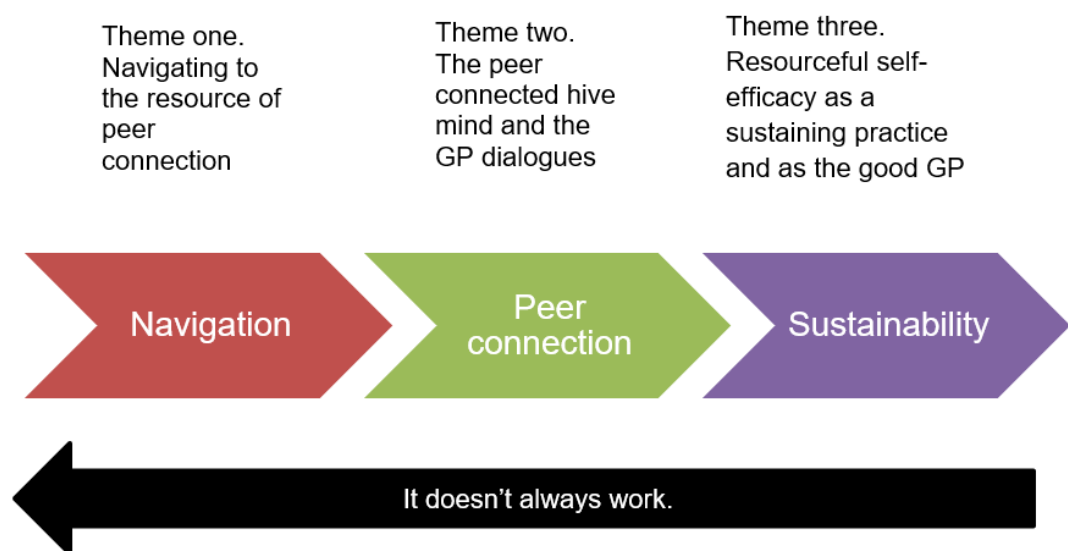
Figure 6.1. The story of the data

The next sections discuss the individual themes and situate them in relation to what is known in existing theory, addressing new results and contributions. The research questions are addressed as answered by the results.

6.3.0 THEME 1: NAVIGATING TO THE RESOURCE OF PEER RELATIONSHIPS

There are constant pivots and shifts within the relational world of peer connection. These pivots and shifts can be viewed both pragmatically and psychotherapeutically as a series of contextual factors, motivations and needs.

This theme addressed the navigation towards peer connection both pragmatically and psychotherapeutically, that is, as a relational move from "isolation" towards a peer-connected concept of GP practice. Notably, GP isolation in practice has been a relatively underdeveloped concept within the general practice literature and is mostly described as a rural issue.(29) Isolation is often characterised as a geographical or mechanistic network concept relating to practice location.(7, 28) A literature review by Viscomi et al, compared rural Canadian and Australian GPs with regard to rural attraction and retention factors and found an ill-defined concept of "social isolation" needed to be addressed to attract and maintain rural placements for GPs.(29) However, in an Australian qualitative study of registrars, it was suggested that isolation was a structural part of any general practice.(1) This latter characterisation of "one room, one doctor and one patient" is reflected in the findings of this thesis. This thesis has found isolation could be experienced in any geographical context and is often relational.

Central requirements for most GP-participants in this thesis included remediating isolation by developing, firstly, informally a relational, peer-led knowledge-management system. Secondly, many GP participants resourced an informal, peer-led therapeutic alliance. The study results develop the concept from isolation to connection needs clinically, emotionally and therapeutically.

Sometimes, for some GP-participants interviewed, relative peer isolation was desirable and acted as a boundary against the time pressures in general practice; to limit the emotional labour of another peer-to-peer relationship; and to recalibrate their cognitive energy or mood. It can also be desirable to avoid peer connection when the values of the practitioner are at odds with the prevailing clinic values. Values of care mismatch is often described in the literature as a "moral hazard" and can be a contributor to burnout.(154, 271) Paradoxically, "isolation" is also rewarded as there is more time available to spend consulting patients than being peer connected, given Australia's structural volume- and activity-driven fee for service payment model of general practice.

There are costs as well as rewards for participating in peer-connected activities. For example, the findings showed how GPs seemed more than willing to forgo personal time, for example working through lunch, to meet workplace demands. This is a systemic paradox: it is known that there are risks of isolation as regards professional education, yet there is a system that incentivises it.(1,

148) ome findings characterised this behaviour as a "good GP" providing a service to patients. This was a source of pride as the findings also suggested consistently that patients' needs were a prime concern. Comparably, in Denmark, due to the known benefits of peer-group work, GPs are subsidised and resourced to participate in group learning activities.(66, 124) A recent scoping review looking at similar quality circles (as peer group work is named heterogeneously), demonstrated major benefit for continuing medical education and quality improvement.(272) Of note, the effect sizes 'vary substantially' being sensitive to 'local conditions' and more work is required to understand more about what works.(272) This thesis builds upon that gap by forming a relational view of positive affiliative relationships within GP peer groups.

Other factors in the thesis participants contributing to isolation include health issues impacting the practitioner. Firstly, illness of various sorts was largely unrecognised by colleagues as a contributor to any GP peers' isolation. For instance, some participants were unable to participate in social activities that involved food due to allergies. Secondly, burnout was more often recognised by colleagues than by the suffering GP. GP participants in this study suggested burnout in a GP peer as a reason for lower participation in peer-group work. Illness, therefore, contributed to isolation and was not the GP choosing to simply avoid peer connection, but a structural impediment to participation. This may be a part of complex stigmatising behaviour observed in GPs more broadly around health and help seeking.(136, 273)

Burnout is defined by the tripartite constructs of work-related emotional exhaustion, depersonalisation and low professional efficacy.(71, 76) Burnout was a large concern of many of the participant GPs, which is supported by the literature and the prevalence of burnout including in the Australian GP community.(46, 53, 274, 275) Many of the participants discussed both the cognitive and emotional loads of seeing patients as a vulnerability of practice, which is consistent with the literature.(276-278) Many of the participants described various ways of managing burnout. This included, but was not limited to, peer connection, which was one way of managing the cognitive and affective loads of general practice. They frequently commented that another trusted GP had intervened to assist with their own insight and self-care in this regard. However, peer connection was more often framed as a preventive measure rather than a treatment for burnout.

The literature supports peer-group work for burnout management but more often describes outcomes of a "formal" process such as mindfulness or education or non-specific talking, rather than relationally focused explanations.(59, 124, 165, 279) This thesis addresses informal self-determined management of cognitive and affective loads of general practice within a dyadic relational view.

Peer groups in various ways have been utilised and found to protect against burnout.(5, 55, 124, 165, 278) Current literature also demonstrates peer-group work is often formal and follows prescribed methods of education.(9, 64, 103, 280, 281) Outcomes of peer-group work, rather than the relational work of peer connection, are what are commonly reported. Much of the communication and relationship literature has focused on the GP-to-patient relationship dyad.(64, 282) To date, the informal GP-to-GP relational context has not been closely examined. As shown in this thesis, the GP-to-GP relationship is clearly important and relationship research fulfils some of the knowledge gaps about what might work in the complex study of quality improvement peer group literature. (272)

Comparing this thesis work there are knowledge outcomes that support existing literature and some that extend the knowledge. One study of the relationships of primary care providers found they were important and, according to participants, surprisingly so.(5) In that research, the primary care providers were largely surprised at the strength of their response to a positive affiliative relationship.(5) That finding is supported by this research. With few exceptions the navigation towards a peer resource was an instinctive one, often existing below awareness, yet also paradoxically appreciated, with some participant practice owners deliberately creating an enabling environment to allow peer connection to flourish. We know that burnout literature consistently rates community as a potential intervention without a description of peer-to-peer relational work. (3, 76) So, whilst there is much theoretical speculation and assumption that something important happens in a GP-to-GP connection, there is little empirical focus on the relationship between GP peers.(5, 37, 64, 66)

Another dimension of the isolation construct is the false perception that some GPs were not participating in peer-connected activities. There was a degree of othering creating a dichotomy of

identity around a constructed good GP–bad GP concept.(178) In other words, there was a perception that some GPs experienced a "paucity of peer connection"; however, this may be a perception occurring only to an "outsider". The "other GPs" nominated had resourcefully created other informal networks but were not participating in the nominating GP networks. The reasons for that navigation away from one source of peer relationships towards others were very often contextual.

Most of the results in this theme, however, demonstrate a strong motivational drive to seek out and connect with peers as evidenced by the naming of this theme as navigation.

6.3.1 A pragmatic view of peer-connected relationships

The very practical challenges of general practice included developing access to knowledge networks to manage the daily knowledge requirements of practice within a rather instant timeframe.(33) This was so pervasive and important that all but one of the participants suggested they could never work in a solo practice for this reason. Interestingly, even the one exception to this finding described using informal relationships to support knowledge requirements in practice.

Informal learning is well established as a discipline in the wider literature.(91, 128) An Australian study suggested that GPs preferred a more informal structure to meet learning needs rather than formalised bureaucratic learning plans.(283) This need for informal learning seems to fill the gap the GP participants in this current study identified. The preference might explain the high value that was placed upon peer connection as a resource by the study GPs.

The thesis results, however, extend the knowledge of the factors involved in navigating peer connection and informal learning in general practice. Up until now, insight into how GPs navigate the sociocultural context of the workplace to access informal learning opportunities has been poorly defined.(272) Medical students were described as iteratively navigating peer-group learning in a sociocultural frame, but to date this has not been examined in the Australian general practice workplace.(162) The relational view of learning relationships has been largely invisible in the literature. There was a study on developing virtual communities of practice for Australian registrars and GPs in training, but again this focused on technical and network structure rather than relational

requirements.(102) This thesis extends the understanding in this case of the learning needs of Australian GPs that is grounded in their workplace and social contexts.

This thesis also extends understanding of informal learning relationships and the knowledge for relieving the anxiety of the knowledge demands of general practice. This is a framing of GP educational needs that has some emotional overlap with the uncertainty surrounding clinical diagnosis and management in general practice.(167, 284) The participants not only described new knowledge that was accessed, but also frequently described obtaining reassurance against any unknown changes in information. This motivation relates to the difficulty of keeping up with medical knowledge requirements, acknowledged as an impossible undertaking, and notably this extends across all the medical sub-specialities.(139, 285) The navigation elements required to reduce that "dissonance" of practice knowledge utilising a relational peer connection are not well known. What is known is that within the general practice context of instant knowledge needs, the evidence-based guidelines are not always used.(2, 34, 139)

6.3.2 Developing a personalised peer-to-peer learning web

The sociocultural model of learning is established within the community of practice literature.(99) However, an Australian review of GP training in the virtual world found no community of practice research relevant to general practice.(102) A more recent review suggested amongst other mechanistic issues in an interdisciplinary virtual community of practice that "trust" was required.(130) The literature is not at all informative on the process of developing that trust, whereas this research addresses that gap and expands the concept of community of practice beyond simply the clinic walls or the virtual world. The participants interviewed in this thesis, identified relationship-building initially in a very pragmatic way. The findings of this work extend the concept to an informal, personally derived network of communities based on specific relationships. These peer relationships are established via a very practical series of factors and deepen successively, iteratively into a relational resource for workplace problems.

Whilst John Launer of the Tavistock[11] Clinic in London and a more recent BMJ opinion piece have theorised that this informal resource of peer relationships in general practice is important, the practical contexts for the enablement of informality have not been well studied.(37, 179)

This thesis shows the practical contexts described by the GP participants included having adequate practice facilities such as a lunchroom, food, a suitable practice size and enabling staff. There needed to be freedom from the constraints on time with overlapping matched lunch or food breaks and freedom from financial constraints on time. As in the literature, participants discussed having unstructured protected time with peers as a preference.(1, 7, 8) The space provided needed to be a "safe" space and mindful of patient confidentiality, and the GP needed not to be exhausted from patient demands. As in related disciplines, letting the relationships develop rather than engineering them worked better.(129)

At a clinic level, leadership was needed to facilitate the culture of sharing of knowledge resources. Peers needed to be available and have enough similarity between them in terms of values and practice styles to enable a congruent dialogue on shared activities.(286) Yet diversity was also valued. The power hierarchy needed to be relatively flat. These findings further expand those requirements into a complex web involving not only the clinic walls but virtual environments and conference locations.

The practical needs, however, were not merely finding time, space and available people, but continued into more subtle navigations which occurred only once those practicalities had been managed. The psychotherapeutic navigations are discussed further in the next section. Notably, the deeper GP peer relationships evolved from the practical serendipitous spaces and were being navigated simultaneously. The thesis findings suggest the clinical knowledge networks are a prerequisite to the affective knowledge resource developed by peer connection.

6.3.3 A Rogerian view of peer-connected relationships

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[11] The Tavistock Clinic is a large psychoanalytic centre of excellence in North London, UK established in 1920 which was originally involved in the treatment of returned soldiers and their psychological trauma from World War 1. The clinic's work in psychiatry, psychology and sociology is disseminated widely, as is its teaching of those in the helping professions. Research and education on the impact of the workplace upon the helping professionals occur here also. It is here that Michael Balint originated Balint groups for GPs in 1950.

The intrapersonal contexts for navigating peer connection can be understood through the psychotherapeutic lens of Rogerian humanistic theory.(4) The Rogerian lens provides a theoretical approach to understanding relationships for learning and therapy.(4, 48) Using the Rogerian approach allows an extension of understanding of the GP peer therapeutic alliance as an "ideal relationship" using framing constructs of empathy, congruence and unconditional positive regard.(4) According to some of the study participants, this peer relational resource was particularly useful for those GPs with a high number of complex patient presentations including mental healthcare. The management of the affective load and subsequent emotional labour by the GP within the consultation, often used peer connections that were highly specific, highly selected and informally derived.

6.3.4 Understanding a therapeutic alliance

We know from psychotherapeutic theory that the "therapeutic alliance" includes the following three constructs:

1) The "working (learning) alliance"[12]
2) The "transference–countertransference dynamic"[13]
3) The "real" (human) relationship[14](63)

In psychotherapeutic theory, the problem of transference and countertransference is a part of any therapeutic alliance. It can contribute to personal distress unless the as-if observer component of cognitive empathy can be maintained.(63, 83, 277) By navigating towards a peer who is maintaining cognitive and affective dimensions of empathy, the participants in this research indicated that the as-if perspective could be restored in a supervision-like "debriefing" conversation.

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[12] A working alliance is the agreed task of therapy or healing to improve outcomes. It can also be called a learning alliance as this is where the dialogical therapeutic work occurs as a learning activity on the common interest of healing or therapy or learning.

[13] Transference–countertransference are the feelings, attitudes or defences from a past relationship projected onto the present relationship which can distort the current relationship due to reactions from the past. This often requires help from others to hold the distortions against the current reality of the present relationship. These can invade and disturb the working alliance if not attended to.

[14] Real relationships are authentic non-distorted relationships free from the distortions of transference and countertransference. Terms such as "genuine humanity" are used within this theoretical psychodynamic construct.(63.
        Duquette P. What place does the real-relationship have in the process of therapeutic character change? Jefferson journal of Psychiatry. 1993;11(2):11, 114.   C. Edward Watkins J. Moments of Real Relationship in Psychoanalytic Supervision. The American Journal of Psychoanalysis. 2012;72(3):251, 114.   Ibid.

This could manage the transferred and projected emotion of the patient. This was a very delicate and dynamic relationship of maintaining the dimensionality of empathy in the context of a clinical therapeutic alliance. It consisted of maintaining the full cluster of cognitive and affective dimensions of empathy and not slipping into personally referenced affective states.

Many participants described peer discussions as the "rational reality" or used hand gestures to indicate the labour of GP consultations as being somehow stuck within their being and noted "talking" helped to release this. This seems consistent with managing the empathic dimensions moving from personal distress of the patient encounter or "stuckness" to regain cognitive perspective taking and then being able to restore warm empathic concern.(79) Talking allowed a more organised and distant view unclouded by personal distress.(38) The clinical therapeutic alliances with patients, therefore, were assisted by forming a tandem therapeutic alliance with a peer which is well known in formal psychological debriefing. (37, 47, 103, 287) This can be called co-regulation or sharing cognitive load.(287, 288) Peer connection helped with learning about the affective knowledge demands of GP consultations by restoring perspective and gaining or "learning" affective knowledge management of self and patient. For the first time this co-regulation and supervision has been shown to be de-novo, informally organised and not necessarily psychologically focussed, often clustering simultaneously around informal clinical based work. This thesis has shown empirically an informal supervision conceptual model already in operation.

There was much complexity around the relationship work however. The navigation to this point could be interrupted by the personal vulnerability of the GPs' intrapersonal aspects of themselves. This affective GP work included the emotional labour of consultations and the inevitable problematic dynamic of transference and countertransference.(47, 66, 103, 125, 172, 269) The GP participants who described this process had usually a longstanding relationship with a very particular peer whom they accessed inside or outside the practice. Occasionally this was a GP spouse. The access was often informal or social.

There were some variations of the peer therapeutic alliance. Some participants had additional formal supervision which they self-managed, yet described the additional benefit of the informal therapeutic peer alliance. It might be called a just-in-time debrief or reset. Another participant had

an ongoing reflective dialogue with his deity regarding difficult-to-manage patients, yet shunned deeper engagement with his peers. This unique approach appeared to be a reflective process also and this GP was one who was reportedly less engaged with his peers.

The layering of needs and relationship depth was reflected in the findings and development of the new concept of heartlines. As previously noted, some participants limited their exposure by selecting patients and a practice style that did not exceed their affective capacity. Other participants limited their hours in general practice to manage this capacity. Some GPs varied the affective capacity daily and contextually to manage the load of countertransference and transference aspects of the therapeutic alliance. The findings extend knowledge and create a new concept of the needs of GPs at the point of care, that is there is a motivation and need for a greater understanding of the affective demands of GP work. It is a learning system consistent with the broad view of therapy as "coming to know oneself in a dialogue with others".(115) Notably in the context of this thesis, this was labelled heart-lines.

GP participants in this research described an informal psychotherapeutic therapeutic alliance that needed delicate relational navigation. This sat outside the previously described formal debriefing procedures of peer-group supervision and Balint groups.(37, 66, 103, 105, 111, 112, 174) The continuous calibration of emotional self-regulation appeared to range from managing the relatively common emotionality of experiencing uncertainty in clinical knowledge to managing the complexity of transference and countertransference in a complex clinical encounter. Peer therapeutic relationships or connections were informally and socially derived to meet these needs.

This "supervision-like" relationship in an informal setting is not well-established in the literature, although research on peer-group work in formal settings does exist.(64, 66, 125) Often the literature describes formal group work rather than an informal therapeutic alliance between two GPs. This is a new finding and notably the navigation towards the trusting therapeutic alliance was purposeful, yet also serendipitous and in many cases existed below awareness, yet was highly valued when reflected upon. Understanding the components as a "trust issue" required a deep dive into the theoretical domains of empathy, humanistic Rogerian theory and psychotherapeutics. These components appeared to be part of the traditional tripartite psychotherapeutic alliance

factors and constituted navigations around an empathic hypothesis of clinical mind unique to the clinician's work circumstances. The Rogerian lens deepened this understanding when analysing the results through each of the three constructs of the lens.

Navigating empathic capacity

Understanding the personal psychotherapeutics of the peer-to-peer relationship is important. The enabling aspects of cognitive empathy or perspective-taking, plus affective empathy (warm empathic concern) and prosocial components of empathy, are salient. The prosocial warm empathic concern components are correlated well with behavioural motivations and expressions that communicate and demonstrate warmth.(60) Being able to manage how the empathy complex varied according to practice demand was very relevant to motivation and participation in peer interactions for GPs. For instance, consistent with the literature, the GP participants found fatigue from GP knowledge demands an inhibiting and modifying consideration in relation to the behavioural expression of empathy towards patients.(60, 79, 82) Furthermore, protecting against individual vulnerability such as burnout and patient errors, defending against "not knowing" and not attending to a GP's personal human needs as a function of work were all issues that needed to be navigated and resolved in order to enter a peer-connected dyad. These individual vulnerability issues were adjusted for in the context of the practical facilities available. Some of these factors had overlap with defending against identity threats, which are known in community of practice research and in sociocultural relationship and identity work.(99, 178, 284, 289) There is some literature already established on the performative effects and fatiguability of physician empathy.(187) We know that empathy benefits patient encounters and outcomes.(86, 103) We know that empathy is multidimensional and having empathic cognitive flexibility is useful in therapeutic alliances.(4, 49, 60, 63, 83, 227) The navigation around the dimensions of empathy is highly relevant to this theme. The clinical mind requires some flexibility within these domains in very short time frames to establish a therapeutic alliance with patients.(86, 187, 269, 290) This study suggests that cognitive flexibility for some empathic clinicians is fatigueable and further that reframing and providing affective knowledge resources with a peer are restoring activities for medical practice.

When empathy is interrupted by vulnerability, even temporarily, an alliance may not be "therapeutic" either with a patient or with a peer.(269) Three empathic dimensions known as perspective taking, fantasy (imagination) and warm empathic concern are all positive components of empathy.(60, 79, 80, 83) Personal distress has a negative correlation with positive empathy and is about having a self-referenced emotional response, not an as-if (patient-centred) emotional response.(49, 60, 79, 80, 83) We know that "flooding" can occur during some interpersonal instances and manifest as the so-called "personal distress" component.(60, 80, 83, 187, 291) We also know that empathy can vary and change.(82) Being conversant and literate in these dimensions whilst managing transference and countertransference with GP work is a demanding cognitive skill.(72) Emotional labour or affective load and cognitive load of consultations are well-established in the literature.(103, 292, 293) Many of the thesis participants described the management of the affective load of consultations as a problem of practice.

Whereas much empathy research emphasises a cross-sectional measure of empathy, this research suggests that acknowledging this capacity as highly variable would be helpful. That is empathy conceptualised as on a dimmer switch as per Baron Cohens theory. (82) This variability of empathy would support some GPs' recalibration of lost or overwhelmed empathy by self-determined access to informal peer connection which the participants described as a helpful recalibration. Without precise definitions of empathy, any visible emotion risks being classified as "too much empathy" where how it is referenced (self or other) will determine how well it is processed and if it was empathic in the first place.(83, 293, 294) Indeed, being able to maintain behavioural empathic dimensions (sometimes called compassion) and emotional regulation was noted to be a skill of excellent physicians when dealing with "difficult patient demands".(72, 150, 293) Restoring equity within the physician–patient relationship is known within the established research to protect against burnout and this study suggests a reasonable hypothesis that suitable peer review of emotionally difficult patient encounters helps to restore and compensate a GP's internal resources.(72, 150, 293) This research suggests that many GPs have already resourced this requirement but struggle to recognise this as a work demand.

The GP participants described many instances of vulnerability. In line with this they described their empathy as varying and their personal vulnerabilities became a part of the navigation of peer connection. In other words, the navigation of peer connections was influenced by negative emotional factors including emotionality arising from patient errors, anxieties about clinical knowledge, fatigue, burnout, role conflicts, clinical uncertainty and GP emotional demands, as described by the GP participants and discussed in the findings. Using cross-sectional measures of emotional intelligence does not capture the dynamic observed in this thesis and a theory of clinical mind, using navigation as a dynamic metaphor, is a contribution of this thesis.(293)

Notably, a very few of the participants reported limitin their overall engagement with "heart-sink" patients, who are patients who contribute exponentially to the emotional labour of GP work.(35) As one of the GPs discussed, GPs tend to develop a certain consultation style and this is largely set early in GP life. In other words, some GPs did not deal with a large volume of countertransference–transference or patient derived affective input. Others had diversified their practice to include medical education roles to limit the emotional labour of clinical work or limited their hours in general practice. A participant GP described two peers who had left general practice altogether to work in aged care to limit this aspect of general practice. More participants discussed the management of emotional labour or affective demands than the need for clinical knowledge demands. This is consistent with the avoidance hypothesis[15] of health practitioners in emotional intelligence research and in literature for nursing staff working with psychologically traumatised patients.(293, 295)

International literature describes emotional demands of patients as a significant threat to physician wellbeing.(6, 150) Connecting with peers was identified as a desired method to reduce workplace stressors in Australian studies but for GP trainees and registrars, and not established GPs in practice.(1, 8) In this study, those participants who chose to participate in emotional labour with patients described various ways of managing the challenges of emotional work and this included peer connection. This study, therefore, argues peer connection is an important method for

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[15] The avoidance hypothesis is when those healthcare practitioners who have difficulty regulating negative emotions manage this challenge by avoiding emotionally challenging situations.

established GPs to manage the complex learning, especially affective demands and emotional labour, of GP work.

Navigating the congruence in a relationship with peers

Congruence was established by the social "chitchat" which occurred with available peers in many areas of education and official meetings, but also enabled by practice processes.(37, 179) Congruence as a humanistic construct consists of authentically matching values and practice styles as well as availability. High value alignment is consistent with literature on wellness in healthcare settings.(296) A non-descriptive component of congruence as "someone like me" was mentioned by some participants, which contrasted with others discussing the benefits of diversity. Congruence appears to be an authenticity and values-based construct that could develop within the small talk of the "real relationship". The psychodynamic "real relationship" component of small talk and receptivity to "friendly dialogue" that participants used within educational contexts were part of navigating the congruent therapeutic alliance with a peer.

The "real relationship" part of a therapeutic relationship is considered to be an overlooked construct in supervisory relationships.(114) The real relationship provides a non-judgemental, non-hierarchical contribution to therapeutic alliance and theoretically its rupture contributes to a critical disablement of the prized working-learning component of the therapeutic alliance.(39, 50, 63, 114) This concept of therapeutic alliance conceivably supports, therefore, the everyday chitchat that is often constructed as "social" and often disregarded. The real relationship allows navigation towards the peer-connected experience by establishing values and congruence.

What this study brings to the field is a potential conceptual model of informal supervision in general practice and the navigation theme develops the factors that enable or disable this therapeutic alliance with all its psychotherapeutic, cognitive and practical complexity. This is illustrated and more specifically discussed in a later section, 6.4.2, and in-depth discussion relevant to Figure 6.2. Enabling congruence to develop iteratively by facilitating social events that support the real relationship may ultimately support a process of peer therapeutic alliance.

Navigating unconditional positive regard

Consistent with the literature on criticism and judgement, this study supports the arguments that negativity and judgement impair learning capacity by disrupting a therapeutic learning alliance.(4, 297) However, there is little empirical work on the quality of work performance, with one randomised controlled study demonstrating that even mild incivility at work harmed medical practitioners' cognitive processes at the time of occurrence and long-term incivility impaired collaborative learning and team performance.(144)

This research extends knowledge around the management of criticism, indicating that GP participants valued critical appraisal but only in the context of a peer connection. For instance, there was a struggle by the study participants to recognise self-reported errors and a preference to point to the errors of the "other GPs". Most participants carefully guarded the idea of being a "good GP" and utilised identity procedures to manage any self-reflection on adverse outcomes. A common fear reported by this study's participants was being thought of as "stupid". Navigating towards a peer-connected experience that was peer congruent and had unconditional positive regard (lack of judgement) for their "good GP" identity provided a safe place and therefore encouraged the ability to reflect.

In summary, criticism or judgement was viewed by the participants as dichotomous, being both good and bad. Managing "criticism" well, was very dependent upon who was reviewing their work and on a reasonably strong therapeutic alliance as based on Rogerian theory. This navigation is consistent with identity work in relationships.(178)

6.3.5 Implications

The pivot and shift of this theme of "navigating the resource of GP peer relationships" have been viewed both pragmatically and psychotherapeutically to enable a culture of peer connection. These results will have implications for the successful creation of a process of learning for both cognitive and affective knowledge-management requirements of general practice. Those learning requirements are detailed more explicitly in the next theme, "inside the peer-connected hive mind and the GP dialogues". Although complex, this discussion of navigation has included the intrapersonal, interpersonal and systemic pivots and shifts that are risk points or stage-gates to

being able to access peer connection. This discussion has highlighted the messy relational journey to get to the destination of a functional working relationship called "peer connection".

6.4.0 THEME 2: THE PEER-CONNECTED HIVE MIND AND THE GP DIALOGUES

"Inside the peer-connected hive mind and the GP dialogues" is the concept of peer connection. This theme consists of three clusters of meaning, or sub-themes: "mind-lines", "heart-lines" and the "out-of-line GP". The sub-themes represent processes and practices that occurred once the GP participants had navigated the entry point into a GP peer relationship. It is the middle of the data story and the core concept of the thesis. In accordance with the methodological focus, this is addressed in both practical and psychotherapeutic senses. Metaphorically, the name "hive mind" is not only a term used by participants, it is also a term used in common parlance with particularly online group GP work. It seems to well represent a modern description of the busyness and the coproduction of knowledge but in many ways and for different purposes at different times. The participants suggested that peer connection consists of mind-lines, heart-lines and out-of-line experiences.

The mind-lines consist of resourcing cognitive and clinically related knowledge work. This is established work within the literature; however, this thesis expands and challenges some of the understandings around the relational processes of developing a mind-line for GPs.(2, 34, 40) The cognitive knowledge includes other necessary contextual elements for clinical work including local community resources, patient social information, business and vocational knowledge. The heart-lines consist of resourcing affective knowledge within general practice. This is a new finding established by this thesis. Although there is existing literature to build upon, this is the first known study to address an informal peer-to-peer therapeutic relationship which I have labelled peer connection within general practice. The out-of-line GP sub-theme is an extension of existing knowledge around groups and identity and extends knowledge around iterative formation of communities of practice within general practice. The theoretical or otherwise real out-of-line GP serves to reinforce other peer-connected relationships.

6.4.1 Peer connection as a working and learning alliance

Peer connection is an intersubjective space between GP peers for the purposes of work. The GP participants largely differentiated this relationship from friendship and although there was some overlap, the purpose and topics of conversation were GP work. Peer connection is characterised by this study as a therapeutic alliance. Peer connection, according to participants, is a relational knowledge resource for both cognitive and affective learning demands within general practice. A therapeutic alliance consists of three intersecting parts.(63, 114) First is a working or learning alliance where the work of the relationship is done. Second is a real relationship where the humanity and authentic genuineness and warmth can be expressed within a realist framework.(50) Finally come the more troublesome transference and countertransference components, where past relational issues can be projected forwards and, if not acknowledged or addressed, can be disruptive to the working alliance and the real relationship.(39, 50, 63, 114) Notably, transference and countertransference are inevitable in any relationship.

As discussed, therapeutic alliance can be formulated as a series of psychotherapeutic "navigations" towards a complex knowledge system otherwise known as a working or learning alliance.(63) There will be inputs to the relationship from the personal to between-persons to the systemic. Consistent with that formulation and focus of the thesis, the working alliance component of the GP peer relationship is peer connection, a relational "workhorse" for general practice work. This is both a learning and a therapeutic relationship consistent with Rogerian and constructivist theory and with more recent work on cognitive load theory.(4, 39, 49, 50, 63, 98, 114, 288) It is based on subjective psychotherapeutic views of the therapeutic encounter consistent with research approaches to the GP–patient therapeutic relationship.(48) However, in this study the therapeutic encounter is applied to the GP–GP peer relationship as a therapeutic alliance and the contribution it makes to the work of general practice. This is an extension of the theoretical approaches to relational research within clinical medicine. The nursing literature has looked at the importance of nurse to nurse relationships in institutional settings for staff sustainability and work culture. (298) More recently in NSW a negative relationship culture in the nursing profession was shown to harm health care systems, including patient care. (299) However, to my knowledge, this is the first

general practice research and in an out of hospital setting that describes specifically a GP-to-GP therapeutic alliance in depth.

The peer-connected relationship is therefore the working and learning alliance of a knowledge-management system for general practice. This peer-connected relationship consists of a knowledge-management resource for cognitive clinical knowledge but also, as proposed in this thesis, for affective knowledge work. Because the theories are complex and yet interlinked with many moving and dynamic constructs, I have illustrated these in a diagram which is at once artificially reductive but also helpful in simplicity as a basis for the subsequent discussion.

Figure 6.2 critically links research theory paradigms to a clinical theory of mind hypothesis. This clinical mind in readiness and in conjunction with another ready clinical mind enters into a peer connection seen through a lens provided by Rogerian theory. Once within the relationship, a working and learning relationship is enabled and seen through a lens provided by psychodynamic relationship theory. Learning theories underlying constructivism and cognitive load theories explain possible outcomes of learning together. This is explained in more detail next.
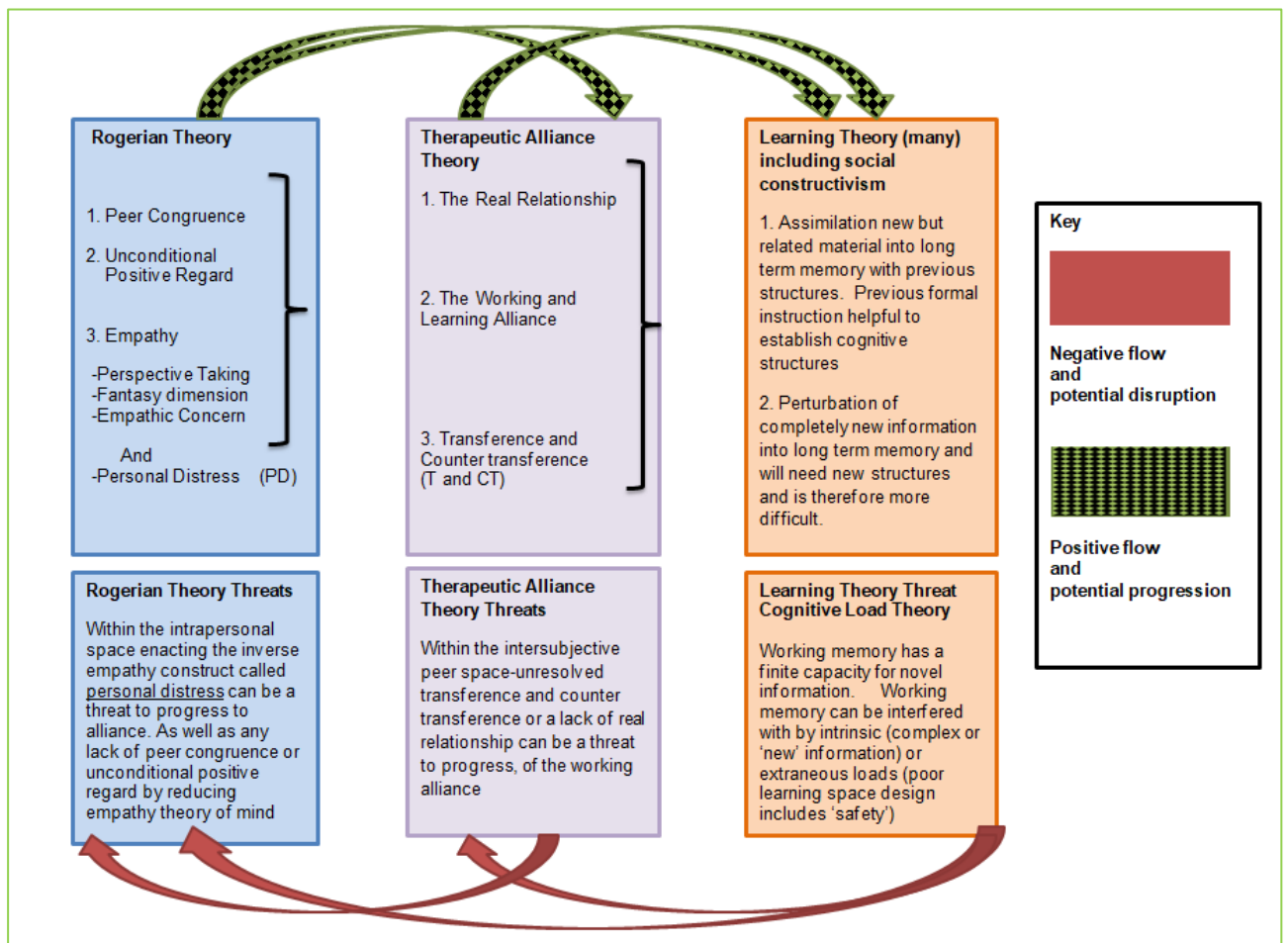
Figure 6.2. The working and learning relationships of peer connection

6.4.2 A hypothesis of peer connection and an explanation

Figure 6.2 has three interlinking psychotherapeutic and cognitive theories in the larger top three rectangles.(4, 49, 50, 63, 98, 287) These large rectangles form a progression of relationships towards learning. However, as the arrows indicate, there is much backward and forward motion, noting the artificial reductivity of any such diagram. This complex back and forward movement has already been clarified in discussion of the navigation theme. The smaller boxes at the base of each larger theory rectangle are where the threat to progression or the interruption of ideal expression of that particular theory may occur. This threat is particularly in relation to the thesis topic of a relational GP learning model called peer connection. It is acknowledged that this illustration does not represent all of the complexity and that a debriefing conceptual model is still being developed even in hospital settings where the concept of formal incident debriefing is better developed. (300) This conceptual figure therefore is an explanation of the underlying thesis data and will be useful to orient the reader. It represents a hypothesis of a peer-connected theory of mind.

The first left-hand (blue) box of Figure 6.2 illustrates the components of the Rogerian theory. The Rogerian theory is the work upon which Balint groups in GP supervision are based and describes an environment of preconditions for ideal therapeutic and learning alliances.(4, 48, 49) Notably, the arrows are not causal but suggest a flow of dynamic relational alliance. At the base of this larger rectangular box is a smaller rectangle noting the threats to this theory within the contexts of an interpersonal relationship. The Rogerian theory rectangle illustrates the necessary requirements to form a therapeutic alliance. For example, the threats from "personal distress" can impair the expression of empathy. The study participants described this impairment as well as a lack of peer congruence, especially in values, and a lack of unconditional positive regard described as judgement or criticism.

Secondly, within the next (purple) box is the psychotherapeutic therapeutic alliance theory, which is a tripartite component of constructs(39, 50, 63, 114) consisting of:

1) the real relationship, which is a genuine human relationship based on authenticity (congruence) and grounded in reality
2) the working alliance, which signifies the work of the relationship which could be the task at hand, either therapeutic and/or learning; in this case it is GP work
3) the transference and countertransference, which can be problematic unless addressed within the working alliance where past relational schemas inappropriately disrupt the current relationship.(39, 63)

Within the second psychotherapeutic theory rectangle and when involved in any therapeutic alliance, the working and learning alliance component can be threatened by elements of transference and countertransference in the intersubjective dialogue. There are potential disruptions too within the work of the real relationship. Recent work on supervision relationships in the psychotherapeutic literature, the medical literature and the psychology literature has begun to investigate the real relationship part of the therapeutic alliance and the role of affect within the various domains.(33, 39, 63, 114, 179, 288). The role of affect within general practice peer relationships is another contribution of this research. Further contributions to the understanding of the real relationship are made by this thesis. For instance, participants discussed the lunchroom and meals where the real relationship can be established. This has been addressed in discussion of the theme of navigation.

Thirdly, the figure illustrates the working alliance and its flow into learning theory in the final large (orange) rectangle. If the peer relationship is successfully managed and the working alliance is established, then there is a flow into learning (as well as therapeutic work), which is a development of social constructivism.(98, 218) The thesis participants similarly described this in terms of who they would or would not approach for checking or seeking of clinical information. An important part of learning theory is that if the total cognitive load of new information is greater than working memory capacity, then learning becomes difficult.(288) This is the basis of cognitive load theory, which is a development of Piaget's original constructivist theory of assimilation of new knowledge into a cognitive store of existing knowledge.(98, 218) Piaget also developed the concept of perturbation, a major cognitive disturbance in learning new knowledge where new cognitive structures need to be formed and so the transfer into long-term memory is more difficult.(98) Assimilation is a relatively straightforward transfer of learning into existing long-term memory, but perturbation is a more difficult transfer requiring more cognitive restructure.(98) The more modern cognitive load theory describes these difficulties of transfer in terms of working memory for either assimilative or perturbation-styled learning work and develops Piaget's constructivist learning theory.(288) The degree of cognitive load will determine learning capacity and this has relevance in particular to GP peer relationships and especially the experience of affect.

The working alliance forming peer connections, as described by the participants, allows learning in the cognitive and clinical domains, which are thematically sub-themed into mind-lines. The learning when occurring in relational and affective but also clinical domains is thematically sub-themed into heart-lines and the out-of-line GP sub-theme describes a different but essential process within the relationship theory. These are now discussed more deeply.

6.4.3 The sub-themes of peer connection

Sub-theme: mind-lines

Mind-lines were first established by Gabbay and Le May in 2004, within British general practice, utilising a longitudinal ethnographic study design.(2, 33) The mind-line was defined as:

guidelines-in-the-head, in which evidence from a wide range of sources has been melded with tacit knowledge through experience and continual learning to become internalised as a clinicians personal guide to practicing in varied contexts.(33)

In this thesis, the GP participants described this within a relational context. It consisted largely of in-practice work but also in areas of general practice outside the clinical consulting rooms. It is notable that the original research defined mind-lines as internalised, whereas this study suggests there is an intersubjective frame to the facilitation of mind-line development and hence the need for a more flexible constructivist theoretical approach as described in the methodology.

The study participants described mind-lines at conferences, leadership meetings, educational evenings, college examination procedures, home with medical family, social events with medical colleagues and in online environments including social media. Social media and the interactive nature of online communities were noted by educational researchers to be a recent extension of opportunity for mind-line development.(301) Whilst the collected research examined the existence of mind-lines, the outcomes of mind-lines and the philosophy of mind-lines, no study to date has examined the relationships of mind-lines.(33, 34, 40, 301)   To explain some of the findings as mind-lines, it is helpful to consider that some of the context can be situated within the traditional EBM model, as shown in Figure 6.3.(139, 140)
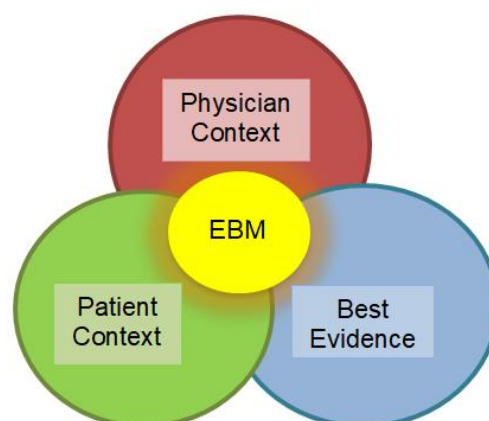
Figure 6.3. Evidence-based medicine components

As a knowledge-management process, this study setting is mostly within the physician context of clinical expertise for knowledge. There is a need for mind-lines which relates to largely positivist evidence or guidelines needing a qualitative change to practical therapeutics for patients. This is illustrated by the evidence based medical diagram in Figure 6.3 having patient and physician contexts, and these contexts can be lost if guidelines are imposed in an overly legalistic manner. The participants described that the sort of knowledge they needed was not available easily or could not be adapted from a "guideline". This can be argued to represent a qualitative view of a largely evidence-based discipline or else to reflect the false separations of the nature of truth.(52, 140)

Contrasting arguments exist, however, that mind-lines and peer-group knowledge work risk neglect of EBM by GPs.(52, 140) This argument is a dichotomous view that knowledge work in general practice is either mind-lines or evidence-based guidelines. However, it is more, as argued by Sackett, that the politicised and legal nature of the guideline risks it becoming a tyranny, which the evidence-based community was cognisant of with the original conceptualisation of the triadic model.(139) This thesis argues that mind-lines complement guidelines and are consistent with applying a patient and a physician context to clinical medical knowledge. The necessity of mind-lines is a practical response to knowledge needs in the workplace. The participants were very consistent about the value of this need and of the role peer connection plays in pragmatically addressing this contextual knowledge requirement of their work as general practitioners.

How mind-lines fit into existing work: The current literature on knowledge management for GPs supports a gap in available so-called just-in-time methods of obtaining clinical information.(12, 32, 285) Just-in-time knowledge is a description of the immediate knowledge needs of clinicians when in consultation with patients.(12, 32) Formal learning modalities such as published guidelines and journal articles are not always aligned or available with the clinical information needs at the just-in-time point of care.(2, 12, 30) Informal learning and on-the-job learning are well-known ways to address these requirements that sit apart from more formal methods of delivering knowledge.(2, 34) The participant GPs in this research all demonstrated this use of an informal knowledge-management system within a more immediate timeframe. All thesis participants consistently

described an informal learning system largely using the peers around them. This is consistent with established research on GPs' informal learning practices described as mindlines for clinical and cognitive needs.(2, 34, 100, 267) What this study demonstrates is that mind-lines are a highly adaptive and resourceful response to diverse knowledge needs of GPs. What is new is that mind-lines represent a non-accidental *relational* knowledge resource, with much relational work involved in their development.

Evidence-based decision-making: The thesis participants using the known concept of mind-lines were responding in a physician-context and patient-centred way, which is very much consistent with the original triadic view of EBM.(52, 139, 140) I would argue that at least part of the triadic view of the evidence-based model is qualitative in keeping with its original formulation. Best evidence, notably, is included in some of this and not assumed to be all quantitatively derived. This is illustrated in Figure 6.4 based on sources.(139, 140)
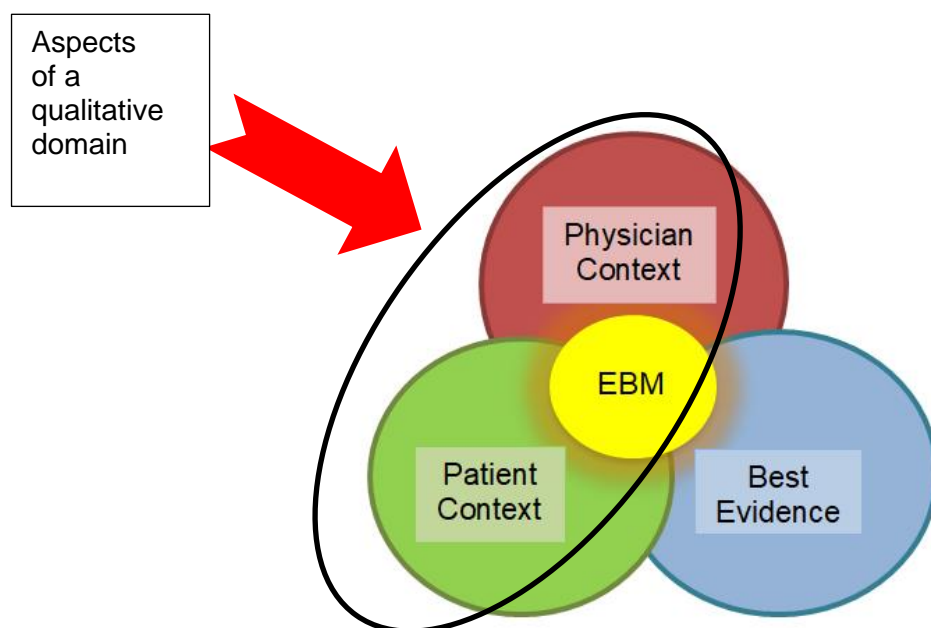
Figure 6.4. Highlighting the qualitative domain of evidence-based medicine

Within the mind-lines literature, as with the study participants, aspects of "trust" and the "networking" or "getting to know" one's colleagues are considered a part of developing a mind-line heuristic.(2) However, the concept of trust in a mind-line source was not explicitly expanded upon.(2) Indeed, the original proponents of mind-lines argued more recently "comfort in dialogue" was an area of research need. This is consistent with the thesis participants, who used the word

"comfort" often when generating a dialogue. The participants described a qualitative process using relationship types which ranged from a simple resource for a simple problem to a deeper relationship typified by the words "colleague" and "role model". This supports the literature that social capital or networking is an important first part of finding out where the knowledge in practice resides.(33, 179) Some of this genuine authentic relationship seems grounded in the real relationship component represented in and discussed with Figure 6.2.

Consistent with the literature, there are cautions against bias and the risk of developing a "wrong" or out-of-date mind-line resource.(2) The thesis participants supported this caveat and discussed the benefit of diversity of resources within clinical knowledge domains. The participants described an awareness of variation in clinical practice and some had sophisticated discussions of clinical decision-making heuristics. The variation discussion included the participants being aware of when variation was normal and reasonable, and when it might become unreasonable. The participants in this study were not unquestioning of mind-lines but there was a pragmatic utility to the practice.

The original EBM discussions included awareness of complexity, rather than duality of paradigms.(139, 140) The Cartesian splitting of evidence into guideline versus contextual practice has been unhelpful.(52) So, in contrast to Wieringa and colleagues, who called for a "new form of EBM", I would suggest the thesis supports the original discussion of Sackett et al. that "shared decision making" including the physician and patient context are important in formulating a therapeutic decision.(139, 140) Hence, the framing of EBM as simply a hierarchical view of evidence and "cookie-cutter medicine" seems to be the problematic framing of current arguments.(52) This was not the more subtle framing of Sackett, who presciently warned against the tyranny of the guideline or cookie-cutter medical decisions.(139) The GPs in this thesis study described the complexity and the paradigmatic shifts in cognitive attention required working between a positivist tradition and a qualitative reality. This complex philosophical shift describes the paradox and demands of clinical general practice.

Within practice, rapid cognitive and philosophy-of-science decisions are made which illustrate the pragmatic difficulties of the nature of truth and evidence that have long been the province of science philosophy.(51, 52, 302) The participants used mind-line heuristics in many ways to

resolve the complexity. The participants used mind-lines for new knowledge as well as benchmarking of existing knowledge and reassurance. Knowledge also consisted of applications of context and acceptability regarding management plans that might sit outside guidelines but were consistent with the known patient context. The concepts of right versus wrong and uncertainty were very often resolved using mind-lines and it was the largely unrecognised peer relationships that facilitated the success or failure of this.

Relational qualities described by the participants included sharing and reciprocity, which sit within social equity theory for relationships.(303, 304) Teamwork and trust were components of this; however, moving more deeply, participants described being able to borrow the mind (two minds) of another practitioner, the latter concept sitting within the psychotherapeutic literature of therapeutic alliance.(4, 50, 63, 114) The concept of "borrowing another's cognition" is also situated in cognitive load theory for learning.(288) For example, by collaborating with another's cognition the demand on working memory is significantly reduced. This integrates with the Rogerian theory and empathy as an ability to avoid personal distress or anxiety, or perturbation in constructivism, which might cause increased intrinsic cognitive load and therefore inhibit learning.(4, 80, 221, 288) Thus this description is able to contribute to the hypothesis that peer connection is unifying the three theories (see Figure 6.2) and is part of a peer-connected clinical theory of mind in high-performance work.

The participants used phrases such as "fresh eyes" and the "rational reality" to describe this process and utilisation of a peer-to-peer relationship. The use of two minds also resides in the social theories of learning and constructivism, with assimilation, perturbation and accommodation of knowledge.(98, 287) Consistent with processing both cognitive and affective loads, the intersubjective learning environment in collaboration with a peer had to be "safe" as well as "known" for knowledge competence and this was explicitly commented upon by most participants. This was interpreted to mean an objective utilisation of cognitive intersubjectivity within a psychologically safe peer connection. Most of the participants described varying grades of relational safety and selection of a peer based on psychological safety and awareness of a peer's knowledge, values and approachability.

Learning theory and cognitive constructivism: Constructivist cognitive theory of learning fits well the pattern of interactions with the GP peers in this thesis. As they described the interpersonal intersubjectivity of the peer relationship as a working alliance for GP work purposes, the GP participants also described the deepening challenges of superficial to deeper clinical learning needs. Particularly around such issues as more complex case presentations and experiencing variation in clinical decisions, the peer-to-peer relationship followed Rogerian inputs, for example, in relation to unconditional positive regard and the concept of a "good critic" where diversity was accepted based on an existing relationship. This can be compared to a "bad critic" where the feedback would be rejected when there was no peer congruence and no unconditional positive regard or non-judgement. Those judgemental and non-congruent interactions were not sought and were considered unsafe or disturbing. This is discussed later in this theme as the "out-of-line GP".

Cognitive load theory includes having a safe environment which can significantly decrease cognitive load, although there has been less research on the effect of emotions on cognitive load.(288) Emotional loads in medical simulations have demonstrated a significant contribution to either intrinsic or extraneous cognitive load which can decrease working memory if they are negative emotions but assist working memory if the emotions are positive.(288) More recent work is suggestive that defensiveness in the learning environment needs to be reduced, especially within debriefing situations within medical faculties.(287) This explains some of the participant GP stories where they would accept or reject a colleague for information seeking based on the perceived judgement they might expect.

Thus, the mind-lines were enabled often with a broad group of peers who were selected for their areas of expertise and pre-existing relationship. The real relationship and the participants' discussion of the "tearoom", "food and nurturance" and even "bike riding" were an important part of establishing a peer resource within the working alliance of the relationship. Much of the clinical mind-lines work was related to benchmarking and checking knowledge and applying knowledge to local context including such contextual knowledge as appropriate referrals. There was also advocacy knowledge, business knowledge and vocational knowledge shared. This was an accepted and readily described practice by all participants depending upon their just-in-time need.

A study by Joyce in rural Australia supported these requirements of learning.(7) Joyce found that the support networks for rural GPs consisted of a layering of clinical, social, workforce and professional support needs with clinical support reported as the greatest need and this impacted rural practitioners decision to stay or leave the rural area.(7) Social support was not clearly defined in the study by Joyce.(7)

Reducing cognitive load is important in learning environments. This study suggests that the knowledge work was mostly occurring in an assimilative cognitive learning resource, which would seem consistent with the knowledge already accumulated by the GPs in more formal areas of learning. Having large stores of existing knowledge is known to reduce the cognitive load of novel information and therefore reduces the potential for impairing knowledge transfer.(288, 305) This has relevance to the general practice informal learning environment of the thesis study where GPs were already experts in a constantly changing knowledge field.

Collaborative cognitive load theory is a more recent extension of established empirical theories around the cognitive construction of learning.(305) However, even recent articulations of cognitive load theory do not address the relational emotional or learning alliance and continue to see learning relationships in largely transactional terms.(305, 306) Furthermore, much of this work has been within medical simulation environments rather than general practice informal learning environments.(287, 288) This study extends known work in simulation and critical care environments to a general practice context. Within medical education and simulation debriefing, some discussion occurs around the debriefing relationship being a "safe" container but again the description is one of process, devoid of relational description.(288) Within the mind-lines literature similarly, the process is well-described within the medical model and evidence, but still the aspect of a relational humanistic frame is neglected.(2, 34)

When the mind-lines were enacted, it was with usually with a known peer. Figure 6.2 explains the links between the Rogerian theory, therapeutic alliance and constructivist cognitive learning theory, and brings the dimension of relational humanism into the educational models. When these relational humanistic principles were disrupted by incongruent peers, by empathic fluctuations or failures, or by "judgement", mind-lines were rarely enacted. This is illustrated by the thesis

participants' own stories of carefully selecting to whom they spoke, about what and when. For instance, they expressed fear of being thought of as "stupid". The GPs also expressed a desire to communicate a successful clinical outcome. All the participants had an established and personalised network to which they turned for informal learning or sharing of successes. These requirements for an established working alliance for therapy and learning were established through iterative humanistic relational principles. The findings demonstrate relational requirements at different levels such as a lack of judgement and deep empathic skills. A peer was needed who had the ability to have an empathic theory of mind, with perspective taking (cognitive empathy) and a prosocial helping attitude (affective and behavioural empathy) in particular.

New knowledge of mind-lines: This thesis extends knowledge of a clinical knowledge-management system called mind-lines into a highly resourceful personal network facilitated by relationship principles. Relationship theory establishes how and to whom the GP might turn to develop a mind-line connection. The authentic congruence, the lack of judgement and positive empathy helped to establish mind-lines. The working-learning alliance facilitated by the real relationship through known social-like interactions meant the GP had developed a knowledge-management resource to assist with GP clinical work. The thesis extends the concept from an internalised cognitive heuristic to an intersubjective dynamic. This was often barely conscious, but when questioned nearly all participants highly valued the resource.

The Rogerian theory, within psychodynamic theory and learning theory, has deepened explanation of the enablement of mind-lines. The participants demonstrated the application of congruence in practice, the essential nature of good and bad criticism being a component of unconditional positive regard and freedom from judgement. Empathy, as a component of theory of mind, was shown to be easily disrupted by daily events.(82)

Psychodynamic relationship theory describes a real relationship as an essential part of maintaining a working and learning relationship. This study extends the concept by providing an explanation for activities in the "lunchroom" and the corridors, for feeling "comfortable" in knowing one's peers within a friendly but not friendship-type quality to the connection. The hypothesis is that there is an interconnection of knowledge gaps and needs that is satisfied by a working and learning alliance

developing as a collaborative reduction of cognitive load, as illustrated by Figure 6.2. This new work complements existing theory and adds to the academic literature on relational knowledge-management systems in general practice.

The explanations provide a new development and theoretical hypothesis on how and why peer connections form. Participants were varyingly unanimous in the value of peer connection. However, the knowledge resource deepened for some into affective knowledge needs and more therapeutic realms of psychodynamic theory, as described in the next sub-theme. Notably, the heart-lines sub-theme is a deeper expression of the connection that enables mind-lines and this is a very new contribution within the literature.

Sub-theme: heart-lines

Peer relationships at work: The process of the heart-line connection for debriefing is also shown in Figure 6.2 with the Rogerian principles for establishing a therapeutic alliance. In this sub-theme, however, affect appears to be triggering more cognitive load and for some participants this generated a variety of responses. Heart-lines represent a deeper experience of connection that predominantly relates to affective knowledge management. All participants made comments about the deeper aspects of peer connection and all saw a need for and a value of affective knowledge management within their general practice. All but one GP described this part of the relational landscape as needing to be "safe" and that this qualitative experience of connection provided GPs with an experience of "witnessing" emotional aspects of practice. Most used words such as "debriefing" and described "benchmarking" of affect as well as social and emotional learning of general practice contexts of the workplace.

Benchmarking with a GP peer regarding values appeared to help with discernment regarding with whom to debrief. It appears checking of values occurred before there was further benchmarking or witnessing of emotionality or psychological distress. Peer relationships appeared to be more carefully selected and some used words such as "friendship" and of "family-like" to indicate the depth of intersubjective alignment necessary to access the role of debriefing and affective knowledge management. It was noted during interviews that emotionally this dialogue was a more guarded discussion which varied in its tolerance with some of the participants. Many used

theoretical "other GPs" to discuss the need, which seemed to be a distancing technique, whereas some described their own vulnerability much more comfortably but very particularly with often only one well-known GP peer. A few additionally used their Balint group, which was a formal supervision arrangement, a few used their medically qualified marital partners and one used their religion in a spiritual sense to provide a degree of debriefing and relief of emotional pressures of practice. Even for those who used formal arrangements of supervision, the informal arrangements that occurred within peer-connected places retained importance. For those with medical partners an "at-home" debrief was not as helpful if the partner was not a GP. Thus, this is new knowledge about what is going on within the black box of supervision like relationships and fulfils some of the calls for more knowledge in the debriefing, quality circle and quality improvement literature. (272, 300) Notably, although out of scope of the thesis, some GPs used allied health staff, including nurses at the practice for some degree of social and emotional learning; although this was limited, it became a proxy that was contextual and related to availability. This would be an area of future research.

The heart-lines of the participants were generally discussed in depth by those who had managed some tolerance of the emotionality and psychosocial learning that this part of general practice work demanded. Some GPs embraced this role and were very comfortable with deep cognitive perspectives on themselves and others. Some were more emotionally literate in this than others and some had great difficulty using language to describe emotional aspects of practice. Some expressed surprise when their patients reflected a dissonant image of themselves in the affective domain. Some participants did not participate with any depth in these discussions.

Some participants avoided the emotional aspects of practice by not engaging with heart-sink patients, some reduced hours to incorporate medical education roles and some anecdotally described other GPs who had left general practice altogether to focus on only one specific area such as aged care.

Psychological aspects appeared to be an invisible part of practice, which some literature suggested is encouraged by systemic technocratic approaches to general practice work.(37) The

majority of participant GPs, however, described peer connection as essential to their own and the practice's wellbeing, even if the articulation of this was challenging for some.

The quadruple aim: We know that psychological distress is a workplace issue for medical practitioners.(46, 53) This includes a large range of international literature from burnout to fatigue for medical practitioners.(14, 15, 46, 74, 103, 278, 307-309) This has prompted a call for a "quadruple aim" in healthcare to incorporate the fourth aim relating to clinician wellbeing:

1) Improving the individual experience of receiving healthcare
2) Improving the health of populations
3) Reducing the per capita cost of healthcare
4) Improving the experience of providing healthcare(27)

As physician wellbeing is increasingly discussed, this is concurrently occurring with a known reluctance for healthcare practitioners to access their own healthcare.(136, 137) Many interventions are described and much of the research utilises connected peer experiences to facilitate a variety of interventions. Apart from some theoretical musings, very few studies focus on the peer-connected experience as a potential contributor to wellbeing in and of itself.(5, 6, 9, 37, 135, 153) Most of the literature focuses on formal arrangements for debriefing and supervision, with only a few describing resilient self-organising informal practices within particularly general practice settings.(55, 103, 279) This study builds on this literature by describing an informal model of supervision that buffers some GPs against threats to wellbeing.

The participants in this study demonstrated a highly resourceful informal solution within their many networks of connected peers for debriefing. In many cases GP peers would, simply by witnessing and by collaborating in the "rational reality", appear to offer a preventive outlet for managing the affective knowledge needs of practice. This peer-connected network seemed to overcome some of the early stigmatising of assistance seeking by establishing a known, congruent, non-judgemental and empathic peer who could assist a fellow GP with benchmarking some of the psychological knowledge work of general practice including distress. For those who were prepared to offer their own vignettes of highly vulnerable moments, informal peer debriefing was an essential adjunct to more formal methods of help-seeking should this also become necessary.

<u>A peer-connected affective knowledge-management resource</u>: Peer connection further builds upon affective knowledge management as a strengths response to workplace demands rather than a deficits model. By utilising a learning and relational theoretical model, as illustrated in Figure 6.2, affective knowledge management becomes another learning environment rather than counselling or personal deficit. The GP descriptions consisted of needing social and emotional learning to particularly overcome and understand the affective inputs and transference–countertransference from patient consultations. By utilising the collaborative reductions in cognitive load, they described a "two-minds" phenomenon to understand the psychological data they were being given from patient consultations. Some of them used the term "witness", some used no words but waved hands around their chests and suggested things got stuck there. Regaining their perspective-taking as per an empathic theory of mind construct, GPs were better able to avoid the psychological distress of empathy called personal distress.

The heart-line occurred within the "safety" of a known and congruent peer in an already established working and learning alliance, and assisted with reduction of the cognitive load of general practice consultations. A prior real relationship was essential to progress this affective knowledge-management component of peer connection. Affective knowledge within consultations needed an outlet to perform the complex navigations of managing the therapeutic alliance with a patient by using a parallel process in a therapeutic alliance with a known peer. This has been somewhat described within Balint group work, within psychiatric clinical supervision and within cognitive load theory and medical education simulation learning, but previously not explicitly within the informal environment of GP peer relationships.(39, 288, 310)

There were some GPs who described themselves as not having or not encouraging heart-sink patients. There were those too who described themselves as quick and efficient practitioners who could close the door on the patient's affect and problems as they left the room. These practitioners were in the minority within this study but provided a disconfirming voice on the need for and use of the heart-line connection. There were some who did not recognise the phenomenon initially but experienced awareness through the process of the interview that they did utilise heart-lines within practice. Finally, there were those GPs who were highly articulate about this process and at least

one GP practice owner had set up the clinic to deliberately facilitate this relational process of informal debriefing. There were salient descriptions of other GPs known to have left general practice entirely due to the problems with managing affective data inputs from the relational experience with patients.

There is very little in the Australian general practice literature regarding a process of peer connection as an informal debriefing strategy. Peer relationships are embedded within the body of resilience and wellbeing practices, and theoretical approaches to management of the workplace.(5, 6, 9, 37, 153, 279) The relationship itself has not been well explored, whereas this research is suggestive of a theoretical explanation and hypothesis that interpret the related fields of psychotherapy, learning and social constructivism, and apply this in a pragmatic way to Australian GP workplaces.(4, 63, 98, 114, 287)

Supervision and debriefing: These are often used interchangeably, but supervision suggests an ongoing longitudinal action, whereas debriefing can refer to short-term critical incidents.(39, 112, 287) Participants in this thesis often used these terms interchangeably but with relative consistency describing short-term single incidents of debriefing and longer term formal processes of supervision. However, the term "debriefing" when used by the participants occurred within a known longitudinal peer relationship for sequential events in GP work.

We know that formal debriefing and group supervision such as Balint processes face barriers in general practice. (174) Barriers include low acceptance of the process leading to a high dropout rate plus a need for long-term participation of at least six to twelve months minimum to achieve benefit.(64, 174) There are systemic problems of Balint groups including the costs in time and money and the assumed paradigms of biomedical disease.(64) There are group problems including group leadership style and availability, as well as safety in the group. There are individual problems including participants' personal styles and reluctance to be there, with uncooperativeness in cases of mandatory attendance.(111, 174)

Furthermore, Balint groups are a formalised process designed uniquely for general practice for processing complicated emotions which arise in the GP workplace. The formalised supervision

process allows a reflective in-group practice for increased self-awareness for the management of "difficult patient encounters", identified as "difficult" by the challenging emotions which can arise in the treating GP.(111) Balint supervision is designed to increase self-awareness and promote reflection in practice as a cognitive skill to assist with medical decision-making.(310) Overall the Balint literature is heterogeneous due to small samples, mixed methodology and complications of effects due to mandatory attendance.(64) However, some reported benefits include psychosocial self-efficacy and improvement in burnout, with the caveat that long-term participation is required to allow reflective change in the willing GP.(64, 103, 111) Despite reported benefits, barriers to formal supervision persist and the numbers of Balint groups are falling worldwide.(37)

There also appear to be barriers to heart-lines or affective knowledge work with a peer similar to those reported in the Balint literature.(64, 287, 288) As stated, heart-lines did not occur for and were not sought by every participant. Some stated categorically that they did not need to form a heart-line attachment. Some suggested that none of this was important, later retracting this within the interview as awareness was gained. Some were highly conversant with heart-line formations, suggesting this was an essential and missing component of practice. Many were very happy with their current informal arrangements for resourcing their own needs in this informal and self-selected way.

That heart-lines are an autonomous and self-selected resource of informal supervision may overcome some of the barriers that Balint supervision faces. As informal peer-connected heart-lines are not mandatory, GPs who do not encourage affective patient data-gathering in practice are not placed in a potentially threatening or time-wasting situation. That the informal heart-line is self-selected assists with psychological safety and development of a therapeutic alliance that is at least pragmatically available for most aspects of GP work. GPs can choose when to deepen the peer relationship for a heart-line experience.

The collaborative cognitive load theory supports the theoretical construct of sharing emotional and psychological learning as a self-aware, reflective learning experience. That some GPs still seek more formal avenues of supervision is suggestive that more social and emotional learning is required for emotional literacy. Formal processes of supervision or counselling that occur

concurrently with peer-to-peer heart-lines suggest that at times the needs are greater than an informal process can provide. Those very emotionally literate GPs who described both formal and informal supervision processes occurring concurrently did suggest, however, that the informal peer connection was essential, that is, that formal supervision was not a replacement for an informal heart-line with a peer, which is an insight suggestive that different needs are being met in those respective paradigms.

New knowledge: A new hypothesis for an informal supervision model for GPs.

The data is supportive of a model of affective knowledge work and this is a new finding within the general practice literature. The theoretical alignment with learning and psychodynamic relational theory suggests a role for affective data inputs as a learning need in relation to challenging experiences within the general practice workplace. As the participants illustrated, the affective work of general practice is not well-supported by systemic factors and models of care in this country. Those systemic factors include GPs' need for protected time, current payment models, technocratic performance requirements and paradigmatic biologic models of teaching "disease". Further, there are vulnerability and hidden curriculum barriers for GPs that are a part of a wider cultural overlay of stigma, emotional literacy deficiencies and barriers to doctors attending to their own healthcare needs. Finally, this work is supportive of a diverse approach to GP work where not all GPs require or desire support for affective knowledge work and so to enforce this would likely lead to uncooperative participation. This work is also supportive of the view that many GPs are resourceful and able to work at a high capacity within a high-performance workplace whilst attending to their varying learning needs.

Sub-theme: the out-of-line GP

How the out-of-line GP fits into existing work: The "out-of-line GP" is a sub-theme of the GP dialogues that constituted a negative dialogue. Both mind-lines and heart-lines were positive affiliative relationships and this theme represents a negative relationship within a peer-connected space. As indicated in the findings, this is a complex mix of temporary and permanent othering, and describes an imagined or actual experience of this. The term "othering" refers to an out-

grouping that originated in anthropological literature but is also represented in modern community of practice literature, where much of the following discussion is initially situated.(161, 264)

Community of practice theory has evolved over time since it first addressed apprenticeship-style practices in a sociocultural theoretical model of learning by Lave and Wenger in 1991.(159) This work predominantly described groups and communities coming together informally for common purpose, although the definition of community is diverse and contested.(101, 147) For the purposes of this study, a community of practice is a joint enterprise with mutual ongoing interaction and a shared repertoire of expertise and knowledge.(147) The community of practice literature has relevance to the identity formation of participants, which is a further development of the original concept by Wenger in 1998.(161) It is within identity that participation and non-participation are described as being associated with the practices humans engage with, as well as rejection of the practices humans do not engage with.(161) People can therefore define themselves by who they are not. It is this out-grouping which is described in this thesis and this is an identity that the finding of an out-of-line GP relates to most closely. The participants used this description to reinforce who they were as a contrast to the out-of-line GP they had either identified or used as a metaphor.

Monrouxe suggested that the work of medical education and learning, when emphasised through a relational perspective, requires some diverse and "loose" theoretical approaches.(201) The individual study participants were describing elements of groups, of systemised power, of gender, self and identity as being intimately involved in the peer-connected experiences of both mind-lines and heart-lines as well as out-of-line experiences. Thus, the conceptualisation of a network and its behaviour in community of practice theory is useful, but the challenge is whether a dyadic relationship is represented by this theory. A dyadic relationship was characterised within Australian GP registrar supervision relationships by Clements as a community of practice; however, Wenger argued that to reduce every social interaction to a community of practice frame would become incomprehensible.(99, 101, 108) Wenger suggested that individuals have multiple communities of practice based on a joint venture or common purpose.(99, 101, 108) It seems a paradox that the intersubjective components of a dyadic relationship would be defined as a community or by the tasks it performs. The thesis participants here suggested that the choice of peer connection is

much more complicated. That is, they were all working on the similar tasks of general practice but did not form a connection unless psychodynamic conditions were met. For this reason, I do not conceptualise peer connection as being a community of practice despite the view of Clements et al. as this is reductive of an individual's autonomy.(311) Such a position, that a relational dyad is a community of practice, makes many assumptions that the joint venture predominates over the intersubjective and that "repeated interaction" constitutes a connected relationship.(101) In this thesis, it has been shown that establishing the peer connection or intersubjective relationship was important well before the joint venture of purpose was undertaken. Identity is, however, salient for groups as well as individuals, so the out-groupings at a theoretical level of communities of practice are useful structurally, but the psychodynamic theory is more explanatory, non-transactional and uniquely personal.(161, 178, 201)

Through the work on identity associated with group formation in communities of practice, it would follow that there are multiple ways to experience in-grouping and out-grouping. However, the scant literature on communities of practice in Australian general practice environments is quite silent on the intersubjectivity of the relational aspects of the networks compared to the structure of the network itself.(101, 102, 160) It is noted to be a common issue that the medical and organisational literature is itself silent on the intersubjective space and conceptualises a rather dichotomous view or else a network view, devoid of relationship.(51, 312, 313) Here, the participant GPs used different conceptualisations of othering for different purposes. Being out-of-line and othering occurred in many more ways than a simple dichotomy of in or out. Othering expressed itself in complex layering of actual and theoretical social positionings, and was more aligned with psychodynamic Rogerian theory and peer congruence.(4) Theoretical othering by participants was more strongly invested in as a negative emotion, with a rejection of theoretical traits and the theoretical unprofessional GP activity rather than the actual experience of othering a known individual.

The real othering was most keenly demonstrated by the outcomes of the recruitment and sampling process for the thesis participants. The second stage of recruitment involved snowball sampling asking participants I had already interviewed for recommendation of a peer who was not

participating in peer groups and who appeared to have little interest. However, as discussed, the second group was not all an uninterested group of GPs without peer connection by which to contrast experiences of peer connection. The perceptions of the first group that their recommended GP may be disconfirming is an expression of various ways of conceptualising an out-group. The so-called out-group members were those who did not interact much with the first group. The disconfirming participants, however, had networks and interactions all their own. The reasons were myriad for the perception of a lack of an interest in peer-connection experiences. These included illness issues, gender issues, values issues and emotional issues perhaps creating unavailability to the first group. The participants of both groups were able to describe the real other as opposed to the theoretical other within their general practice work. There was only one participant who felt he could work solo without any need for peer connection and was content to other himself away from the general collective of relational (workplace) connections.

These formulations of "other" or "out-of-line" GPs could be framed using theories of gender or socialisation of communities of practice. The noted strength of the emotion expressed for the other and its representation as a theoretical other or a "bad" GP were interpreted as a discussion leading to identity. Within the real-relationship dynamics, the need for peer congruence at some level of gender or value or socialisation or age was operating as the GPs described the various levels of connection. Similarity assisted the formation of a peer connection and if not found, then connection was largely avoided. This is consistent with a constructivist concept of the acceptable expressions of the many individually determined faces of identity. This sub-theme addresses the dialogue of the other as a reinforcement of connection aligned with the theoretical approaches to the data. The connection was related to congruence in psychodynamic and relational aspects rather than a focus on a joint venture or task.

GP safety and the out-of-line experience: The participants talked about the out-of-line experience consistently but differently. Communities of practice research in general practice describes psychosocial safety without detailing this beyond structural interpretation.(314) This study extends the concept, as the participants described GP peer safety as consisting of judgement issues, emotional issues and gender issues. All participants described issues with judgement, most had

negative connectivity issues relating to emotional barriers and some had connection issues to do with gender. Judgement mostly related to whether the participant would feel criticised in a negative way or be thought of as "stupid". When knowledge is associated with power and status, a threat in this regard is a significant one to belonging to the culture of medicine.(312) A threat, however, is experienced personally and, in reference to Figure 6.2, can create strong emotionality and flooding into a state of personal distress. The presence or absence of congruence with a peer in this experience can determine whether the interaction proceeds. If it does, then the cognition works through to a working or learning relationship to assimilate the desired outcome of new cognitions of learning. If there was a working or learning relationship already established, the participants could manage to preserve the relationship and experience less threat as the alliance was not as easily disrupted.

Feedback and diversity were framed differently to criticism: Within the context of judgement there was a form of bad criticism which was rejected and prevented peer connection and informal learning opportunities, whereas good criticism was not seen as a judgement if a peer-connected relationship had already been established and this was often called a "variation in practice" or "learning" of either a cognitive or affective type which would then proceed. According to the participants, criticism was shaped by who delivered it as to whether it was good or bad. Bad criticism was framed as judgement. Judgment was a perceived condemning of the personal or professional self. Judgement generated a lot of emotion within the GP participants. The amount of emotionality is important, and also described in simulation feedback, as correlated with safety, noting that too much emotionality threatens safety, leading to increased cognitive load and thus threatening feedback and learning.(287, 288) However, up until now cognitive load theory, emotions and relationship theory have not been framed as a process within feedback or learning environments of established general practice, other than in training environments.(101, 287)

For some participants the out-of-line experience consisted of having some temporary negative connection issues to do with emotional barriers described as not being in the "right" state. This meant even if a working alliance had been established with a known peer, any negative emotion would result in avoidance of the potential for connection. This was interpreted to equate to a

degree of personal distress providing a barrier to connection and the consequential learning opportunities. It could also refer to the observance by the GP participant that their regular peer-connected colleague had a difficult or challenging emotional state. Hence, emotional safety worked both ways in the peer-connected experience, even with a previously known connected peer. Psychosocial safety or emotional safety is described in supervision literature as being an inhibitor of participation and learning by way of triggering cognitive load, as illustrated in Figure 6.2.(4, 287, 314) Personal distress is a significant contributor to cognitive load and, consistent with simulation medical education environments, exerts an inhibitory influence on informal learning within general practice workplaces.(287, 288, 315)

At times many of the participants in both groups struggled with overall emotional literacy and this is suggestive that a perturbation occurred, which in learning theory suggests that there is not enough stored formally learned material to support an assimilation process of (emotional) material.(98, 201, 315) This adds credence to the view of EBM as a purely positivist rational discipline which may warrant review.(52, 139, 312, 316) Developing emotional literacy with patient affective inputs would assist with person-centred, evidence-based diagnosis and care.(86) Affective knowledge management within GP work utilising the symbology of language to assist with processing appears to be another potential gap in learning.

The experience of gender created some strong identity issues for peer-congruent colleagues and this was referenced by participants as a barrier to connecting for a working or therapeutic alliance. This was primarily voiced by women experiencing incongruence with some of their male colleagues. The men notably did speak with other men but did not specify a gender problem of congruence. This is situated very much within the Wainer's thesis which had a description of the sociocultural and gendered enculturation of the medical workplace.(312) It reflects some of the wider feminist discourse on particular challenges relating to the experience of non-male genders within a masculinised work culture.(317) Some participant female GPs described this as being "not understood" but also that their additional caring non-medical duties precluded them from full participation in the archetypal "fulltime GP attending to everybody" workplace. The gendered barrier to workforce participation appeared in some cases to change their identity enough to inhibit

peer-connected experiences for mind-lines and especially for heart-lines with an alternative gender. Yet there were descriptions of mind-lines and heart-lines connections that extended across gendered barriers, so this was not operating for everyone in the same way or at the same time. Gender-experienced emotion and judgement were a part of the story of peer safety for some GPs. This occurred at varying times, illustrating the delicate complexity of maintaining workplace relationships that functioned well for a learning or therapeutic alliance of peer connection.

Illness functioned in a way as self othering and as practical disconnection through time lost. There were two GPs in the disconfirming sample who described this. I wonder how much their illness created a sense of othering for the referring GP in the first recruitment group. As Sontag has written extensively, there are cultural levers in Western culture for the othering associated with illness.(266) Illness is a vulnerability and doctors do not attend well to their own healthcare needs as invulnerability is a part of the masculinised, militarised origins of medical workplace culture that linger within the workplace today.(136, 312) This cultural trope of invulnerability, as Hutton found, may provide some explanation for the invisibility and othering of illness within the study participants.(273) The lack of congruence with a peer and perhaps some countertransference in relational theory of "fear of vulnerability" provide some psychodynamic insight into this "illness" aspect of the findings.(4, 39)

6.4.4 Conclusion to theme 2

General practice informal knowledge is part of established research in international general practice literature, but this research is the first to show Australian general practice has a similar knowledge-management experience.(2, 34, 102) Also new are the findings that peer-connected networks are relationally and contextually dependent on many particular system, practice and personal factors, and that a negative dialogue is sometimes imagined, thus affirming existing identity and connections, and sometimes real, suggesting that congruent alignments and undisturbed empathy are important components of enabling peer connection. These findings further extend the knowledge by demonstrating that there are affective learning needs as well as clinical knowledge needs. Both clinical and affective knowledge management is a part of an informal relational web of peers that can be described as a collegiate therapeutic alliance or hive

mind. The affective knowledge-management system is a particularly close peer-connected experience and limited to a very particular peer.

The informal form of debriefing in the affective knowledge domains is the first description of an independent form of informal supervision for GPs. Informal debriefing was not used by all participants but seemed particularly necessary for those GPs with an interest in and high case load of mental health or complexity in their patients. The collaborative cognitive theory literature suggests that a peer helps reduce cognitive load and in the participants' words reframed the "rational reality". This reframing suggests there was a need for some GPs to debrief from the emotional labour of practice and burden of transference derived from the therapeutic alliance with patients. This often occurred, however, at the same time as accessing more routine clinical knowledge. A parallel therapeutic alliance with a peer helped restore and reframe the perspective (empathy) and allowed a reflective form of learning in the affective domains of general practice. The therapeutic alliance of psychotherapeutic theory seems very much integrated with the knowledge-management capacity: the life underneath the life.

Having an established real relationship with a known peer assisted with feedback that might otherwise be seen as a form of bad criticism or judgement. When criticism was seen as a positive, this occurred in the context of a known and established peer connection. This is suggestive that reflective practice was not common to every GP and their patient load seemed to reflect their affective ability and management. However, for those GPs who did work within therapeutic affective domains, there was a cost that was at least partially offset by a strong therapeutic alliance with a congruent peer. There were some GPs who were described as having left practice altogether due to the demands of affective clinical work particularly regarding the management of transference. These GPs were not participants but reported upon by the participant GPs. This new finding of a problem with knowledge management and a peer-connected knowledge-management remedy in practice developed by resourceful GPs builds to the final theme of "resourceful self-efficacy as a sustaining practice and as the good GP".

6.5.0 THEME 3: RESOURCEFUL SELF-EFFICACY AS A SUSTAINING PRACTICE AND AS THE GOOD GP

This theme is the most interpretable of the themes. It represents the culmination and consequences of the other preceding themes. However, it bears additional characteristics of its own. There was much consideration in the naming of this theme. "Resourceful" reflects the knowledge-management resources identified by the peer-connected hive mind. "Self-efficacy" is a term from burnout literature and represents one of the three dimensions of burnout.(71, 76) Self-efficacy is a sense of personal accomplishment and is a self-reported idea relating to control and perceived ability within the workplace.(318) "Sustaining" reflects the participants' voices in the oft-repeated insight that if (the resource of) peer connection was unavailable, they would change practices or in some extreme cases leave medicine altogether. It was also derived in conjunction with terms such as "enjoyable work". "Practice" is used to name the philosophical nature of medicine conceptualised as neither a science nor an art but a practical application aligned with Aristotlean "phronesis".[16](316) As per the methodology, the word "practice" refers to the application by GP participants of neither inductive or deductive knowledge but abduction as a principle consistent with pragmatism.(202) The "good GP" is an interpretable metaphor that all the participants described in various ways. That is, they were all universally the "good GP" and this was a universal high aspiration. Most GP participants were very keen to share stories with their peers of successful and challenging yet triumphant diagnoses and management. When I was interviewing and exploring education and therapeutic processes initially, this commentary was surprising. The "good GP" and the stories of this contrasted sharply with the dichotomous "bad GP", which appeared in the data as the "other". This is part of the (negative) dialogue component of the previous theme, but as an outcome of identity it is part of this theme. The dialogic is first which then contributes the identity.

The overall thematic metaphor is suggestive of quality practice and the overall aspiration is for patient safety. Patient safety was more theoretical whereas a patient error was a more personally referenced part of the data. A personal error represented more muted voices of a few participants in comparison to the universal aspiration of patient safety. It is not possible to know, of course,

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[16] Aristotle suggested knowledge consisted of *episteme* as explicit knowledge, *techne* as a skill and *phronesis* as practical wisdom (Greenhalgh and Wieringa 2011).

whether all the GP participants' practices were "good" or "bad" or somewhere in between in any objective sense. However, as illustrated, if the strongly held concept of a "good GP" was threatened, the GPs needed resources and cognitive psychodynamic manoeuvres to manage this. This included for the most part dialogue with a peer; however, for one participant GP the symbol of goodness was his income and returning patients, and for another GP the dialogue occurred mostly within his spirituality. The practice of identity formation is also observed in communities of practice, professionalism and medical education literature.(161, 201, 319)

<u>Self-efficacy and identity attributes</u>: A sense of self is a complicated psychological and philosophical construct.(49, 115) Aligning one's experience of the effectiveness of the self within the practices of "life" and the experience of "being" was a key theory of the actualising, individuation theories of the early humanists.(49, 115) These psychodynamic concepts very much align the skills of perception and self-awareness with identity, which equally contrasts with low self-awareness and defence against dissonance between the idealised self and the actual experienced self.(49) In other words, the greater the perceived distance between the idealised self and the experienced self, then the greater the potential for psychic distress or negative emotion. A definition of identity for the medical world comes from Monrouxe, who quoted by Rees, suggested identities are "products of intersubjective and external social processes, constructed, co-constructed and contested through social interaction".(201, 320, 321) This discussion centres on professional self-efficacy, which is notably one of many identities.

For medical professionals, the process of professional identity begins in medical school and is superimposed upon the naturalistic and normal development of identity formation in all humankind.(319) That the participants were very concerned with their own and their projected professional identity as a "good GP" is consistent with identity formation being a universal experience negotiated individually and uniquely, as the thesis data suggests. Professional identity or professionalism as a "good GP" is a learned and aspirant construct, and very much aligned with and related to the encultured ideal of patient safety. Within medicine this process begins within the educational environments where medical students, and later as junior then as senior doctors, navigate with their peers.(201) This work of professional identity is, as Monrouxe suggested, a

constantly evolving construct pertaining to everyone. Using some theoretical flexibility, the thesis results which support an identity of self-efficacy are consistent with constructivist, pragmatist and psychodynamic humanist theory.(4, 49, 98, 202, 204, 218, 310) In accordance with constructivist and humanist methodology, the participants constantly negotiated their own identity and "professionalism" as the "good GP" in the intersubjective spaces of peer dialogue. Monrouxe acknowledged the need for some theoretical "looseness" as the use of language, symbolic objects and power relations operate within the intersubjective dialogues.(201) The results suggest that the theoretical and actual experiences of the participants, including out-of-line experiences, were operating simultaneously as a dialogue and also as identity formation.

Out-groupings are consistently described in the established literature as forming a role within identity formation.(159, 178, 320) The knowledge generated by this thesis supports the established data that there is a concomitant constant, iterative identity management within the peer-connected experience. Identity management within non-medical literature is said to be navigated by "envisioning self through others", by "betterment distancing" (i.e. the other and any negative dialogue) and by "situating self within networks" or groups.(178) The challenges of any group consist of the out-group or a minority needing to assimilate the predominant encultured identity, which can create dissonance between the idealised group norm and the experience of self.(49, 201, 312, 320) Notably, anxiety is the awareness of incongruence of identity and defence is the avoidance of that awareness.(49) Thus the affective experience of personal distress as anxiety, distress or defence is salient, as illustrated in Figure 6.2. This would appear to apply to the participants at an individual level, as well as at a dyad level and a group level of relationships. When personal distress occurs, as suggested by this research, then therapeutic alliance/working-learning relationships become difficult to progress.(4, 63, 79, 114) This hypothesis is supported by the results and is a very *intra*personal experience requiring reflection and some emotional literacy, and yet this very human relational experience has not been adequately theorised within the general practice, community of practice or medical education literature before now.

For instance, more recently communities of practice have been proposed as a methodology for teaching professionalism and identity rather than "lecturing" on professional values to medical

students.(319) However, a proposal of network development as a community of practice is a structural and imposed formality upon an informal construct, with little acknowledgement given to the importance of psychodynamic and relationship principles.(267, 319) By contrast, Monrouxe gave credence to the difficulty of establishing a community of practice for professional identity and contributed a substantial body of work on the "hidden curriculums" of professional identity formation.(201, 320, 322, 323) That work described "acts of resistance" by participants against predominant norms and the influence of hierarchical power in determining whether a member of a community of practice remains a contributing core member or persists in a conflicted legitimate peripheral participation or is considered an out-group non-participant.(161, 201, 319, 320, 322, 323) That work, however, was largely on medical students or junior doctors and, whilst illustrating the need for theoretical nimbleness (power, institutions, networks, education, identity), does not address the intersubjective in any other frame but transactional.

That psychodynamic formulations of identity are occurring concurrently within the self, peer-dyads, groups and wider networks of practice in addition to pragmatic knowledge management represents the complexity of the GP workplace. Identity management and identity defence contribute extended understanding to GPs' workplaces beyond medical school and training. This may help in understanding some of the engagement issues more broadly within the multiple needs of the GP sector.

My research demonstrates for the first time that psychodynamic identity work occurs within informal groups and especially dyads within post-vocational general practice in Australia. The research contributes an explanatory hypothesis for the motivations for, complexity of and consequences of a successful working and learning alliance whatever the workplace need. The GP participants' dialogue also suggested that apart from pragmatic workplace needs, both clinical and psychological, this therapeutic peer alliance is pivotal in establishing identity and sustainability for most GPs.

Identity and burnout attributes: That a strong sense of self-efficacy contributes to sustainability as an identity is alluded to within the burnout literature.(45) The burnout literature also describes the use of community amongst other interventions to prevent burnout.(3, 62) The other interventions

relate to autonomy, reward, person–job mismatch, lack of fairness and values mismatch.(62) In this established burnout literature, the nature of community has not been well-described at a personal or relational level, which is where the contribution of peer connection as a navigated relationship is placed.(3, 62) Most research on community is based on group work, with a mathematical model from social network theory suggesting that individual relational dyads determine the strength of any social network.(169) The thesis results here contribute a qualitative model and hypothesis for that process, and support the findings that individual dyadic relationships are particularly important for a multitude of reasons from learning in cognitive and affective domains to identity and sustainability within the workplace. That burnout (presence or absence) contributes to identity through a self-reflected dynamic of self-efficacy whilst interacting with others is useful in depth knowledge.

Prior to this research, most of the literature restricted itself to group analysis or peer-group performance such as the practice-based small groups in Scottish, European and Canadian general practice, Balint groups, other formal supervision groups and CME groups.(14, 55, 56, 66, 111, 124, 125, 165, 324) The only primary care research to my knowledge investigating a potential therapeutic alliance between peer dyads was conducted by Beckman in 2012 after initial feedback on a multi-intervention trial on New York primary care providers.(5, 9, 325) Within much of the established literature on group work, the outcomes consist of quality measures for CME or for psychological outcomes such as burnout. Clinical education and psychological outcomes are most often considered dichotomously and the work of GPs becomes problematised and deconstructed into various single issues and formalised procedures. This engenders risks of autonomy, of time, of reward and even of values mismatch for those who may not want or have a peer connection, as evidenced by some of those within this research. For some, mandatory peer connection would be counterproductive.

Peer connection in relation to burnout and self-efficacy: The core burnout constructs of emotional exhaustion, cynicism or depersonalising, and lack of a sense of self-efficacy were all involved in the participants' responses in this research. By contrast, there were participants who reported having no burnout. These participants who experienced no self-reported burnout were spread in

age and of equal gender representation. These were six GPs from each group who did not self-report any burnout. There did not appear to be a common issue between them. Various strategies to manage or avoid burnout were described by participants. Most participant GPs suggested peer connection was essential to their sustainability and assisted with burnout prevention. The most common response to a sense of self-reported burnout was to reduce hours or take a holiday. Reduction in workload is a well-established finding in the burnout literature and was represented well by the study participants.(3, 62, 73)

The majority of participants indicated that their wellbeing would be severely impaired by isolation from the peer-group resources This is suggestive that peer connection is a facilitator of resourceful and resilient practice, a strong facilitator according to the emotional value placed upon it by these GP participants. These peer-connected resources were used by everyone for clinical knowledge management. In contrast, many but not all GPs used peer-connected resources for affective knowledge management. The affective debriefing and reframing ranged from an unconscious to a highly self-aware practice.

The good GP identity and self-efficacy management were a silent dialogue around success at work. This practice included managing threats to knowledge via a trusted peer and aligning their work away from the implicit out-of-line GP ("bad GP" or "not me GP"), who was either a theoretical GP or a real GP peer. By maintaining their identity as the "good GP", whether accurate or not, the participants preserved their self-efficacy, which is at least one of the components of burnout. This was a guarded and defended identity, and not everyone in this research was able to reflect upon it.

<u>Other, surprising connections sustaining the GP</u>: That there are other, somewhat surprising connections providing a degree of sustainable practice resource is illustrated by the participants discussing the benefits of general practice–focused peer dialogue with allied health and other practice staff, family at home and other social groups not within the professional circle of general practice work. We already know isolation is identified as a risk to GPs for professional, social and peer support reasons.(1, 7, 29, 326, 327) However, most of this work relates to geographical isolation rather than structural isolation, which is the unique structure of the general practice workplace.(1) Peer connections through allied staff and front-desk receptionists were not a focus of

the thesis and this finding was a little surprising, particularly early on in the interviews. It was a smaller part of most GP participants' knowledge-management resources and often due to opportunistic availability and as a default or proxy for another GP peer. This is perhaps an area for further research but was considered out of scope for this. Nevertheless this knowledge is incorporated and contributes to the sustainability concept of the final theme.

6.6.0 SUMMARY OF THE STORY OF PEER CONNECTION

A problem of practice identified by the GP participants was sustainability. This includes access to timely knowledge-management resources. I have deconstructed these needs as served by peer connection and noted they often occurred simultaneously. Notably, the navigation drive towards access to the resource of peer connection was persistent and varied in timing, approach and needs. The knowledge-management resource of peer connection includes the following:

1) Clinical knowledge: this includes a myriad of knowledge requirements and is sub-thematically called mind-lines
2) Affective knowledge: this is a learning domain involving the deeper aspects of therapeutic practice, much of which occurs within the psychodynamic realms of self and other in the affect; managing emotions within practice is a part of this including the patient's and the practitioner's emotional inputs into diagnosis, management and practice
3) Maintaining self-efficacy: this is a core component of burnout and connected with identity(320)

Having this knowledge resource in place through a connected, personally selected informal network contributes to sustainable practices and GP wellbeing.

This thesis identifies a human relational hypothesis of the clinical GP mind, uniting diverse theories in a consilience of cognition and affect which is very much human and resists ideas of deconstruction. A recent report by the National Academies of Sciences concurred with increasing humanistic principles to fulfil the quadruple aim and improve physician wellbeing.(3) The thesis notably demonstrates that the high need for clinical knowledge coexists with the high need for affective knowledge management and that this can occur simultaneously in particular relationships.

In this thesis, utilising a common and accepted (non-stigmatising) practice of clinical knowledge management such as mind-lines, an opportunity was enabled to access the deeper needs of clinical and humanistic practices. Whilst the surface pragmatics are useful and provide a level of permission to enter the intersubjective domain, the humanity of navigating not only knowledge paradigms but also relational dynamics and identity shifts demonstrates how resourceful the participant GPs were. The concomitant constructivist pragmatic and psychodynamic movements between systems and the personal, demonstrate the complexity of GP work and the high performance of most practitioners to enable that work to continue. Peer connection provided considerable facilitation of complex work-based demands of practice. Location and autonomy of choice regarding their GP relational networks supported this knowledge-management resource of peer connection. Autonomy of practice is well recognised to be a structural factor in helping to prevent burnout, along with community and peer connection.(62) The psychodynamic framing of the humanists' therapeutic and identity work integrated into informal education is a new contribution that extends existing knowledge. The extension is within the domains of self-selected informal education groupings and an informal debriefing or supervision conceptual model that manages the humanistic work of general practice.

6.6.1 A note on the unspoken language of affect

This thesis finding of a conceptual informal debriefing conceptual model, shows a method by which the emotions of work can be managed. In psychodynamic theory, often the emotions and affect are either muted or untrusted as regards the medical cultural assumption that medical doctors are highly "rational" beings practising highly "rational" medicine.(312) This research with its humanistic frame begins an exploration of this and the thesis data proposes that affective knowledge management is a learning process. The participants did not always have the same ability to articulate the language of affective learning, which became noticeable in comparison to their ability to discuss clinical learning needs. Just over half the participants made comments that were coded to emotional literacy. Although thematic analysis is not a content or discourse analytical method, this observation may warrant follow-up.(238) From a psychodynamic view, however, this

observation of reduced emotional literacy for some of the participants did not fit easily and neatly into the existing themes, yet paradoxically fitted into all the themes.

This included observations of very literal interpretations in general, which points to a general literacy issue in answering some of the questions. Whilst emotional literacy difficulties were observed equally between the two groups of participants, general literacy issues were more often observed in the disconfirming group. In a paper on emotional work in supervision, Lombardo et al. made the observation that research, particularly in psychotherapy, can neglect the role of the affect, favouring cognitive approaches to therapy.(315) Especially in learning situations, deeper learning can engender a degree of discomfort through to anxiety which is a part of developing memory in cognitive or affective medical knowledge.(315) Furthermore, without appropriate language that is meaningful, there can be difficulties in managing complex presentations of mental health issues.(36)

By using a Cartesian duality between cognition and affect, the role of cognition in medical consultations has been privileged over affect. This can be inferred from the participants' willingness to use easily available language for managing aspects of cognitive learning compared to difficult and less-available language for affective learning. That the management of affect can be a problem is supported by studies on medical culture, by established work on empathic theory of mind, by learning theory, by relationship theory and by cognitive load theory in medical simulations.(4, 36, 39, 50, 60, 63, 201, 287, 288, 312, 315, 328) Monrouxe explicitly commented regarding *how people talk* about identity claims in medical education*:* "membership categorisation analysis pays attention to the situated and reflexive use of membership categories (e.g. doctor, student, patient) by people in everyday interactions and considers the micro processes within language use".(201) Language is intrinsically involved in naming identity and where there is difficulty with naming, there will be difficulty in claiming.

The hypothesised conceptual model illustrated in Figure 6.2 suggests that affect is important, from the impact on empathy pushing or drifting into personal distress to the process of transference and countertransference in establishing a therapeutic peer alliance and in cognitive load. To move any learning from working memory into assimilated schemas and knowledge, an established body of

knowledge is needed.(98, 315) The difficulty for some participants could be supported by learning emotional affect, as this can increase the likelihood of cognitive load interfering with learning.(287, 288, 329) This is well-described by participants discussing their fears and in those for whom the emotional language was challenging. The language development of this process and literacy requirements may also have been responsible for some of the participants expressing surprise at the nature of their peer-to-peer relationships by not initially recognising the processes they were "naturally" performing.

Equally, recent work on reflective processes on learning and supervision suggested that not everyone can easily reflect and this is an important consideration for future work on GP formal or informal processes of clinical supervision.(315, 330) In this thesis, this domain of learning and emotional literacy did not appear to influence the participation, in peer connection; however, as the research consists of self-reported practices, this cannot be claimed with certainty and is an area for future research.

6.7.0 IMPLICATIONS AND HYPOTHESES OF PEER CONNECTION

The implications of peer connection vary depending upon the lens that is used. Pragmatically, peer connection provides a knowledge-management system for Australian GPs. It is available in an informal manner and often in a just-in-time context. Peer connection is used for established knowledge and benchmarking, as well as assimilating knowledge into existing cognitive resources built up by formal training. In this regard peer connection is a friendly transactional knowledge system that resources domains of knowledge for the whole of the workplace vocation. So clinical knowledge, political knowledge, referral social capital, patient social capital, vocational and educational knowledge, and political knowledge about the structures of work are all domains of knowledge used in GP work. This was true for all study participants. Of note this may need further exploration with other staff members including nursing and allied health who were mentioned but out of scope of this thesis.

Moving more deeply into the relationships of knowledge, the social and emotional learning aspects are relevant for some practitioners. This helps to benchmark and learn the emotional responses

that may be necessary for deeply psychologically therapeutic patient care. Moving more deeply again into highly specific relationships, the wellbeing of the doctor and their sustainability in practice are facilitated by identity of self-efficacy in a job-performance role. Feelings of appreciation by and belonging to a team of self-identified "good GPs", according to the participants, helped prevent job turnover and assisted with functioning in the workplace. The peer-connected relationships form part of a resilience network as well as a knowledge-management resource.

The implications of the importance of peer connection viewed relationally, rather than as a transaction, are implied by the participants' determination to navigate these relational networks of work. For particularly those doctors who participate in the psychodynamic paradigms of healing work and who are nimble across the philosophical landscape of healing, this research contributes an informal supervision conceptual model. It is cheap, readily accessible and self-derived. For continued support of holistic doctors, the structures that support this highly personalised form of sustainable practice need to be better funded and acknowledged. To impose this structure upon other doctors who do not utilise peer connection in the same way could create a bureaucratic tyranny. It is useful to conceptualise the diversity of healthcare approaches in general practice as contributing to a great diversity that presents itself to patients. Patients also select their doctors as much as doctors select the type of practice they aspire to. This complexity needs to be reflected in flexible approaches to patient engagement in their own choice of doctor depending upon the context of their needs. Just as some GPs do not delve strongly into the affect, perhaps some patients avoid this too. Furthermore, policy needs to support doctors to express autonomy of approach with freedom to select knowledge-management resources that suit their style of practice because this contributes to sustainable practices for them.

The navigation aspects of peer connection as revealed by this research show that the systems of work have a contextual influence over the success or otherwise of forming peer connection in the workplace. From a systems point of view, a lack of protected time to interact with peers and a lack of funded arrangements for pursuing peer-group meetings mean that the dyadic strength of these relationships can be challenging to establish and maintain. Within practices, leadership can be a help or a hindrance to the development of peer-connected relationships due to the nature of the

practice culture. Issues include being mindful of the physical spaces of work. The lunchroom chatter, the co-location of rooms, age, values, personality and gender can be levers in forming or hindering a good therapeutic alliance with a peer. Practice leadership may provide a special challenge of its own in guarding against practice isolation due to the need to lead and the need to create a lack of interpersonal conflict within the practice. Practice owners may need outside peer therapeutic relationships to assist with developing a psychologically safe and congruent peer alliance.

Many of the women described the isolation that maternity leave presented and many solved this by forming therapeutic peer alliances with known contacts from training times. These issues may well have implications for learning. Autonomy operates to allow GPs to choose to informally sift and sort the available networks into a layered resource for work purposes.

Implications of the psychosocial aspects of peer connection are suggestive that more formalised knowledge is required in emotional literacy and psychodynamic education. However, equally this intersects with the systemic pressures on a high-throughput workplace based on volume and agency. At a policy level, the humanistic nature of healing is influenced by neglect of the many humanistic paradigms within which healthcare operates. When healing is seen in its broadest humanistic sense, it would seem policy needs to step back from formalising what is a very human desire to connect and to be the best and do the best at work. Instead, facilitation of psychological safety for both patients and physicians would appear to be enough for the most part to assist most to aspire to be a "good GP". Peer connection has implications in this regard for contributing to the quadruple aim of healthcare.

6.7.1 Key ideas generated

1. There is an ideal clinical theory of mind with patients and a collaborative colleague who is nimble and agile across cognitive dimensions. This is especially represented by Figure 6.2 and can be called co-regulation (of empathy) within collaborative cognitive loads.

2. Peer connection is a therapeutic alliance.

3. There is an informal conceptual model of supervision that occurs with peer-connected experience.

4. Sustainable practice requires the development of local knowledge-rich peer resources.

5. Access to knowledge resources, both cognitive and affective, builds identity through maintaining perceived self-efficacy.

6. The good GP is everyone and every GP has their own language for this.

7. Affective knowledge within General Practice faces significant barriers to manage including developing emotional literacy. Emotional literacy is needed within consulting rooms, in debriefing practices and in areas of learning. Therefore, practice implementation seems warranted given the educational, but must include the humanising value of affect for both GPs and patients which requires funding reform. This is particularly true for those GPs working in mental health.

8. Emotional literacy is a worthy avenue of further research for clinicians and educators.

9. Evidence-based medicine cannot be a purely positivist activity. It requires application of qualitative principles to satisfy the physician and patient contexts and the quadruple aims of practice.

6.8.0 CONCLUSION TO THE STORY OF PEER CONNECTION

Peer connection is an important component of the general practice workplace. This study has explored this concept and developed it into a model for informal supervision within general practice work environments. This builds upon theoretical work and provides an empirical contribution to the literature. The relationships are not always acknowledged yet paradoxically appreciated, with many GP participants reflecting upon their importance to them staying in any practice. The role of peer connection is the enablement of a peer-resourced learning network in clinical and affective domains. It is flexible and can be adapted and graduated according to the needs of the individual GP. There are many ways to facilitate peer connection including practice facilities and leadership role-modelling. Relationships up until now have been an under-recognised resource for general practice learning, quality improvement and sustainable practice. Whilst equally the relationships were identified as having an important role in general practice, they are also nuanced and potentially fragile to systemic, cultural and personal challenges. As a learning network, however, peer connection enables practice and, in some cases, provides a buffer against the isolation of general practice, thus enhancing GP wellbeing at work.

Chapter Six in review

Peer connection is a new model of general practice informal supervision which enables work functions.

There are new contributions to the nomenclature such as heart-lines revealing that allow for and value affective knowledge needs for clinical practice.

There is an expansion of the known knowledge about general practice mind-lines for clinical knowledge management.

A hypothesis of a clinical theory of mind demonstrates the cognitive complexity of general practice work with rapid shifts throughout empathic, relational, learning and cognitive load dimensions.

Careful management can facilitate a supportive and enabling environment for peer connection.

There is a nuanced fragility to the relationships that provide sustainability for a high-functioning workforce and provide a buffer for workforce wellbeing.

GPs develop their own personally referenced network of relationships that suit their individual practice styles and needs.

CHAPTER SEVEN: CONCLUSION

MAIN IDEAS

This chapter concludes the exploration of peer connection which was the primary aim. The research questions are addressed very explicitly. There are limitations to the research based on the research design and these are described. More research into relationships of work is warranted. The utilisation of human factors at work for quality improvement seems a worthy pursuit for all.

7.1.0 INTRODUCTION

The final chapter of the story of peer connection is short. The iterative and reflexive work has been presented with thanks to the GP participants. What has been shown is that the complexity of general practice work and the challenges of the workplace place significant burdens upon ordinarily competent people. These challenges of the workplace can be buffered by enabling peer-connected relationships to buffer against those challenges. The supportive elements for peer connections are described and provide a contribution to healthcare system reform.

The relationship between colleagues needs to be prized for its professionalism and contribution to good patient care and sustainable practice. The wellbeing of the profession is a critical issue for workforce retention as the participants indicated with wanting to leave a practice if GP relational networks were not positive and affiliative. Allowing autonomous development of peer connections will assist with healthcare delivery, from knowledge challenges to wellbeing Issues and workforce retention. It is one part that until now has resided without description in a social framework simply called 'community'. These individual relationships, however, have been shown to be a critical part of ongoing learning in a high-performance workplace. The humanitarian principles of enabling relational medical culture make a worthy contribution to good patient care.

7.2.0 ANSWERING THE RESEARCH QUESTIONS

7.2.1 Answering research question 1

What are the roles of peer connection in the occupational experiences of Australian GPs?

This answer is the role of clinical knowledge needs as mind-lines and it adds new knowledge to this established concept. Secondly, there is an entirely new concept which explains the role of affective knowledge needs called heart-lines. Heart-lines are a completely new contribution to this field. These two knowledge domains are not entirely inseparable, which is a key addition to knowledge work in general practice, and there is subtlety in whether they coexist or not. Clinical mind-lines may precede the development of a heart-line. The heart-lines as fully expressed are the deepest and most complex of the relationships that occur due to the contributions of affect. This can be framed as the deepest part of the informal supervision relationship. Finally, the out-of-line discussion on identity within the work environments of general practice builds upon existing knowledge within identity work and medical culture as it relates particularly to concepts of patient safety. The identity work is important as the connected relationships contribute to the identity of the good GP, which assists with internal feelings of self-efficacy and sustainability. This is an important and further role for peer connection as establishing a sustainable practice for individual GPs by supporting a continuance of a self-efficacious medical identity with access to peer-connected knowledge and resources. Notably, these are not easily available elsewhere. The roles of peer connection are knowledge work both clinical and affective knowledge with identity and sustainability arising from the self-reflected resourcing of just in time connections. The development of a clinical theory of mind hypothesis adds to existing work in simulation training on cognitive load but in this case specifically addresses the emotional load of various knowledge requirements in the intensity of therapeutic alliances with both GP patients and GP colleagues.

7.2.2 Answering research question 2

How does Rogerian theory explain occupational relationships in Australian general practice?

The Rogerian theory explores the psychodynamic structure of the GP peer relationship using the framework of empathy, unconditional positive regard and congruence for both learning and therapeutic environments.(4) This frames learning and therapeutic processes occurring together, which is supported in this study. This framework also supports the concept of safety in learning environments utilising relationships. The Rogerian theory has contributed to a hypothesis of a clinical theory of mind. This clinical mind seeks refuge and recalibration in an informal supervision

practice. By exploring this framework, a hypothesis for a clinical theory of mind was developed which is dynamic and influenced by many internal and external factors. A nimble cognition around the multidimensionality of empathic processes, relationship work, learning dynamics and collaborative cognitive load work is well supported by the concept of peer-connected experiences. Navigation to the resource of GP peer relationships looks at many of these factors and is largely a descriptive and pragmatic theme. Whilst there is pragmatic discussion for the enablement of peer connection such as lunchrooms, leadership and availability, there is also the psychodynamic navigation which is involved in choosing the very individual peers for the connected experience. The intersubjective space between GP peer experiences is explained with Rogerian theory, but also with cognitive constructivism in learning theory. The personal identity structures that support sustainable practice are a consequence of the peer-connected experiences and intrapersonal therapeutic dynamics. The resulting informal supervision is an adult learning model for both cognitive and affective knowledge. Both knowledge domains are essential in the management of patients. Empathy in practice and its constant recalibration is an additional hypothesis to the empathy in clinical practice literature. Showing the sustainability of carefully defined multi-dimensional empathy utilising peer relationships is a unique description and contribution.

7.2.3 Answering research question 3

How does the context within the general practice work environment influence peer connection in the workplace?

The context of the general practice work environment is well described by the machinations described in navigating to the resource of GP peer relationships. This study has shown constant micro adaptations to enter or reject a therapeutic alliance or connection with a GP peer. These influences were shown to include system influences and local workplace and personal factors. This discussion allows some pragmatic structural principles, as well as psychodynamic and personal factors of individual GPs, to explain the multifactorial environmental and cultural influences on the successful formation, or not, of peer connection. These answers will be useful for policy and planning for medical environments. The successful enabling environment of peer connection is informal but purposeful. It is not an environment that can be overly managed as management

needs to be facilitative of independent GPs finding their own peer connections. Forcing GPs into these relationships may be counterproductive for some more than others and at different times. The delicacy of peer-connected relationships is matched only by the fierce way in which the study participants defended the relationships as essential to their daily general practice.

7.3.0 LIMITATIONS AND FUTURE DIRECTIONS

Limitations of this study are those of an exploratory study of a facilitated mechanism within the workplace where the lens needed to be broad and dynamic. The terrain was unknown. The traditional narrow theoretical focus of research was generously flexible within the method of thematic analysis. Some aspects of this work are limited due to complexity and the need to focus exclusively on the peer-connected experience, for instance, the discussions around connecting with other members of staff or at home with medical family. The size of the practice itself whether metropolitan rural or remote did not appear to limit the resourceful development of a peer network especially with the advent of technology. What did change was how this was resourced and developed and this may be another area of further research.

There is an interdisciplinary acknowledgement that some aspects of this work are suggestive of hypothesis that require further research. Bringing in highly theoretical approaches from other disciplines can be challenging, with the questionable generalisability of those theories to general practice workplaces. The hypothesis of a clinical theory of mind stops short of theory development and needs to be tested further. The contested conceptualisation of empathy within the literature and across disciplines as diverse as philosophy and medicine will continue to be challenged.

The recruitment of participants with an interest in peer-connected experiences may have missed the nuance of a disconfirming group. My questions were around the positive formation of an affiliative relationship I had observed, and this may have impacted responses. The initial questions flowed from an open-ended description of practice to asking what the participants thought of their peer interactions to then asking about any particular peer relationships, then with asking if there were different types of interactions, and the final question repeated how would you define peer connection now, allowed for negative and positive relationships. These questions also seemed to

indicate a growing awareness of the relationships which was discussed as observable invisibility in other literature, although it has to be considered as a potential limitation and response bias. (331)

Participant observation and ethnographic research may help clarify that better. The snowball recruitment of a second group produced interesting results, but still may not have captured a disconfirming voice adequately. The two declining GPs from the second recruitment in solo practice remain intriguing; both made a similar comment that they "were not like other GPs", which remains unaddressed. The difficulty of recruitment of a disconfirming voice on peer-connected activities is likely to be challenging with any research design, given that GPs are notoriously difficult to recruit to any study.

Response bias can be problematic within the relatively small medical communities of Australian general practice and this may have been operating for parts of the recruitment. My role within education and leadership groups may have increased the response bias. Further, interpretive reflexive thematic analysis acknowledges that the researcher is a part of the data and, whilst this brings strengths, it also brings limitations. There are undoubtedly unknown unknowns existing in the data far away from the landscape of my own experiences. Even with an unknown or an outsider as an interviewer, recollected experiences are useful for exploration of a topic but may need observational correlation. Yet also being a GP and relatable undoubtedly helped with obtaining data, as supported by the hypothesis of the research!

Missing voices within research remain problematic and some of this is commented upon in the sampling description. One of those voices which is a limitation includes not asking specifically about ethnicity. For instance, there were no Australian indigenous GPs identified in the recruitment sample. Another potentially muted voice includes GPs in vocational training in general practice as well as rural and regional practitioners who expressed significant interest in participating in the research. Younger in-training doctors were excluded due to their mandatory participation in peer relationships for training purposes, while constraints of research time and funding limited the ability to interview more participants from rural and remote regions. Nevertheless, having some participants within this cohort was pleasing. Questions remain unanswered regarding the other

rural GPs who offered to participate. Finally, international medical graduates are a significant part of the Australian general practice workforce and their voices from diverse cultures and continents remain voices that are relatively unheard within this thesis; although there were some such participants, it is hard to know if this was enough given our country's great diversity of workforce participation. There are all sorts of other intersectional issues that the research findings also challenge, such as unwell doctors and doctors of non-binary gender or sexual orientation, which were not explicitly sought or excluded, and it is hard to know if this is a significant part of another conversation about in-groups and out-groups. The study comments briefly on emotional literacy as an observed phenomenon but, without content or linguistic analysis, this remains an observation warranting further investigation.

This research has inserted humanistic theory into the workplace of general practice. The proposed learning typology and clinical hypothesis of GP mind will warrant further empirical testing within this setting and this establishes some exciting paradigmatic transdisciplinary research leads for future work. I am very aware of the potential for this research to have international implications, especially in countries with similar workplaces of healthcare clinicians. The implications may extend to other health professions and to workplaces more broadly. This, therefore, requires further research.

My own role as an active clinician in the production of the research has been clearly and reflexively woven through the analysis and results. This is both a strength and a weakness in respect of declared bias; however, I hope on balance there is more of a contribution to knowledge. The reader will determine this through their own lens.

The relationship of learning in its broadest sense, to include personal development over a lifetime of work, has connections with quality general practice and to professionalism. A recent paper suggested lifelong learning is part of quality improvement activities across the medical workplace.(325) The undercurrent of the emotional lives of patients and doctors calls into question the archetypal culture of medicine being sufficient and fit for purpose. Diagnosis and management

require more of the knowledge base of emotional life and the language with which to privilege it if we are to encapsulate an overall diagnosis in whole-person care.

7.4.0 AN EPILOGUE OF COVID

During the course of this thesis a major global disruptor appeared in the form of the COVID-19 pandemic. Reflecting on this, it would seem that the themes of community and connection are more salient than ever.(332) The pandemic has placed unpredictable and changing demands with a disease-specific focus upon resources for healthcare, demands that go contrary to holistic person-centred care, with the consequences of a demoralised, fatigued and burntout workforce.(333-335) Furthermore, there is a quiet quitting going on with significant issues relating to workforce sustainability in healthcare.(335, 336) It could be argued that the quadruple aim principles are forgotten when moving into a period of economic and global workplace stress.(27, 334)

During the time of the global pandemic, there has been disruption of connections and many stressors, highlighting a greater need to understand the humanity of connection and its multitudinous, facilitative purposes in the workplace.(333, 337) Health systems are complex and the illustrations in Figure 1.1 and Figure 1.2 are as salient as ever in order to bring some organisational as well as individual coherence to the disruption.(3, 213)

A 2023 scoping review of the primary care impacts of COVID-19 indicated themes of:

1) wellbeing of healthcare workers as one of the major effects of the pandemic; along with

2) primary care service redesign and telehealth

3) chronic disease care provision; and

4) the post-pandemic future of primary care.(338)

A recent 2023 editorial in the *British Journal of General Practice* described the primary care crises relating to a sustainable workforce as a global crisis.(339) Peer connection as a mediating, facilitative relationship has therefore become highly salient as, for all the hype of technological solutions to human problems, there is still a need for relational learning, relational support and reflective practice.(340) The participants with one exception described leaving practices without

peer connection. That peer connection contributes to sustainable practice is a hypothesis worth testing further, given the nearly unanimous support of the participants for the essential nature of informal peer relationships as conceptualised here. Furthermore, this thesis provides additional descriptions of systemic factors for enabling peer connection for individuals delivering healthcare.

We know systemic attention to the physician experience of delivering healthcare seems prudent and is based on good economic modelling.(3, 27, 334) This research illustrates the enabling effects of peer connection through facilities like lunchrooms, through leadership's tacit approval and role-modelling that "social time" at work is not wasted time, through modelling of examples of availability and vulnerability, and through time-coordination across practice teams for debriefing opportunities. Furthermore, resisting notions of overengineering, these opportunities allow GPs to find their own resources in a supported way. Values matching, capacity matching and remaining cognisant of the wide clinical variation in practice styles are important in facilitating support and, if overlooked, can derail a supportive peer connection.(334) It may be obvious but is worth restating that a GP focused on skin cancer and procedural outcomes may not find a deeply peer-connected relational knowledge network with a GP focused on adolescent mental health or holistic women's health. Although power dynamics were not overtly examined in this research, the level of congruence, as described by participants, needed during positive peer-connected experiences suggests this is important to dissolve as a gradient of impediment.

The thesis presents opportunities to note the informal edges of the peer-connected experience to manage those GPs who are not obviously participating. Checking in with peer-connected colleagues provides permission to change workload and opportunity for reflection for burnt-out GPs, but only if that query on wellbeing is asked by a trusted colleague. This is quality improvement and a safety net for physician wellbeing. In another insight useful in the post-pandemic phase, practice owners may be isolated through their own concept of practice governance and therefore some practice owners may have specific needs for a supportive network. This isolation is similar to that of GPs with language or cultural issues or the very salient illness issues identified by this research, where self-selected silencing and removal from supportive learning networks and relationships occur.

More recent current regulatory and compliance implications arise from this research. There are important reflections for the structural compliance arrangements in Australia to consider the impact of a notification of standard "practice deviation", or "nudge" letter, from the Australian Health Practitioner Regulation Agency (AHPRA) or other regulatory bodies to ensure threats to identity are skillfully managed.(341) These letters risk the good GP identity and dissonance with a "bad GP or out-of-line GP" attribute is highly threatening and potentially damaging. The aim of regulatory and compliance work must be to engender a dynamic, informally peer-connected profession that thrives on quality improvement. This implication for current and future regulatory matters involving GPs seems highly relevant, noting the study participants' careful discourse around self-referenced errors versus the ease of noticing the errors in others.

The new knowledge generated in this thesis supports Greenhalgh's more recent work on value complexity in healthcare systems.(213) Greenhalgh's research concluded that relational work supports complexity especially in systems of uncertainty where conflict is celebrated and not avoided both for sense-making, where positivist ideas of right and wrong technical science prove insufficient for health decision-making, and for supporting conversations which contribute to quality improvement in healthcare.(213) These are areas of further study but equally illustrate that knowledge is not pure and is delivered in relational and cultural structures rather than legalistic frames.(52, 302, 341)

Working in teams has become an increased policy directive from government but there has been limited discourse on the enablement of team-based working. Team-based working was reviewed recently and the stability of the multidisciplinary team over time and communication were highlighted as enabling functions with reductions in clinician burnout.(337) However, whilst the human needs of participants are being described, discussion of the relational "what and how" is still relatively neglected even in recent research. This thesis fills some of the "what and how" gap by hypothesising the clinical theory of mind in a relational sense, with areas for future research on emotional literacy highlighted. This thesis also highlights the unique needs of GPs, as participants discussed parallel support or allied health support being helpful but not the same as support from another GP in a well-known peer-connected relationship, nor indeed was support from another

non-GP specialist (even as a spouse) a completely suitable replacement for this unique GP-to-GP dialogue. This focuses on the very unique need to understand the general practice workplace from ontological and epistemological standpoints regarding issues of generalism and its complexity.(342, 343)

There have been increasing calls since the onset of the pandemic to support the expertise of generalism as a solution to the complexity of healthcare needs.(213, 332, 342, 343) By paying attention to the roles of human relationships between GPs, framed here as a therapeutic alliance, the calls for team-based care may well fail without recognition and support of the enabling factors of peer connection. These relationships have an important role in supporting systemic functions of healthcare systems, especially patient care. According to this thesis, relational strength directly contributes to a GP's informal learning network encompassing clinical (mind-lines) and affective (heart-lines) knowledge needs. Notably, this is layered and often simultaneous knowledge work.

An emerging body of work in learning health systems (LHS) recently demonstrated potential for quality improvement processes and an Australian case study described this process.(267) Consistent with the earlier thesis commentary, however, this very recent systemised view again demonstrates the privileging of governance process and outcomes but remains mute on the facilitation of relationships, using the phrase "practice culture" as an apparent proxy. Peer connection, on the other hand, is a more de novo self-derived process, seemingly more flexible, and the commentary by Dammery et al. does not include reflective debriefing or psychotherapeutic comments regarding education, enablement of learning or resulting sustainable practice.(267) It might be peer connection that has some explanatory power for the success or otherwise of quality improvement initiatives in general practice. Peer connection goes further to encompass emotional aspects of practice as part of a learning-management resource for some GPs. This thesis, however, frames emotional literacy and management of these aspects of practice as learning. The structure of an LHS is described as an innovation; however, with an emphasis on process there can be mute or hostile voices, as demonstrated by this thesis, which need to be considered in any practice-wide community of practice or LHS.(334) An editorial by an Australian-based research

team involved with this work correctly identified that further research is needed in the implementation of LHS.(100, 267)

The key missing piece from the structured and formal model of proposed LHS is the relational aspects of informal knowledge networks shown in this thesis, noting these peer-connected networks may already be in place.(100, 213) This thesis provides some evidence that the LHS innovation may already be happening in general practice, with an informal peer-connected experience enabling quality improvement. A recent 2023 thesis on peer support for nurse leaders (including drama therapy) had commentary on the social and emotional benefits of peer-connected experiences to nurses, and therefore patient care, yet cited a need for further research on barriers, enablers and outcomes.(336) Because relationships are frequently both underestimated and difficult to research, this raises the question of whether GP peer connection may be contributing to the success of many quality improvement, wellbeing and learning activities.(5)

Sustainable practice in primary care is also especially challenging since the pandemic.(335) In medical education, emotional learning using the clinical theory of mind and framing learning as a therapeutic process to enable professional identity, patient care and sustainability could be seen as an important competency for new and established GPs.(344) The heart-lines sub-theme of peer connection reveals a rich layering of therapeutic learning of the skills of generalist patient care. Informal debriefing contributes very strongly to sustainable practice, according to the thesis participants, and is worth enabling in practice for many without being forced upon all GPs.

This thesis conceptualises peer connection as an important facilitator of quality improvement processes in informal knowledge networks. Peer connection includes emotional learning, professional identity and knowledge of self (therapeutic processes), all of which assist with quality improvement in patient care. The participants' voices reflect a very deep and overlooked nuance of the primacy of human relationships as knowledge resources within healthcare systems, before, during and after COVID, as enduring humanistic principles. The pandemic and the challenges of artificial intelligence have paradoxically thrust the value of peer-connected humanism in healthcare into even greater focus. As more recent research suggested, humanistic qualities in healthcare

need to be re-examined and considered a priority.(3, 334, 345) Relationships in healthcare are facilitative and provide:

> The oil that keeps you running.

7.5.0 AND SO FINALLY

There are often calls for supervision for GPs. However, this research demonstrates how resourceful GPs can be while working within a limited-resource setting in a high-performance workplace. The GPs in this study demonstrated a vast array of resources existing within the ephemeral body of knowledge held by the community. The individuals navigated and chose their resources in a relational manner that was fit for purpose and fit for context. Whilst there is research on mind-lines and endless debates on the performance of EBM, the GPs in this study just got on with the practice of medicine.

In true Aristotelian fashion, GPs are concurrently straddling philosophy of science issues, patient complexity, changing knowledge and relational webs in their delivery of healthcare. The emotional salience of this is significant and this thesis brings the humanity of patient needs in terms of an affective dynamic into the learning needs of general practice. The affect is often relegated in favour of the dynamic of rationalism, but this study demonstrates what a false paradigm that is for both patients and practitioners. By uniting the needs of cognition and affective learning as a consilience of knowledge and learning, it might be that we can conceptualise the diagnosis of illness as more than a linear biological process, this linearity being reductive and alienating of patients and of some health practitioners.

What we mean when we say holistic healthcare is demonstrated here and, in the conceptual model developed, it is shown that there is a clinical theory of mind. This is not static but needs to be highly flexible across the affective and cognitive domains of existence. Empathy and cognitive load are clearly linked in the pursuit of learning and therapeutic relationships with each other. This thesis provides, through an exploratory approach, a hypothesis that unites learning in humanitarian ways that benefits both patients and providers. It would be worthy to explore this in multi-disciplinary teams also as a future direction.

Allowing disconfirming practitioners the autonomy to practise as they see fit is an interesting framing and may need revision should the cultural and political levers change to enhance the full scope of human healing practices. The influences of the culture and current Australian funding models are resisted by those who can see and operate the affect and practice in resolution of articulation. Autonomy is helpful for practitioners in navigating the resources of peer connection, which naturally has intersections with policy. Resilience in a sustainable workforce includes resilience of the workplace and resilience of the culture. These are interlinked and interdependent, as illustrated by the vast relational navigations of the practitioners in this thesis, who chose to fulfil aspirations to practice as the "good GP".

More research is of course required to test the hypothesis and it will be a challenge once again to the established hierarchy of medicine and of research to lay claim to the emotional lives of doctors and patients in learning and building a resource of healing through relationships. That this very human resource is an act of resistance within an increasingly industrial model of commercial healthcare is a heroic journey and one that must continue if we are to fully comprehend all diagnostic input data from patients.

To ignore the influence of the affect on diagnosis, on response and on learning is to ignore our own humanity. This literacy is sorely needed within institutions of power, policy and education, the workplace and of course the bedside.

As one of my esteemed long-ago informal mentors has suggested and from a man who would know, from the darkest to the brightest moments:

Relationships are life.

(Vale to the late Dr Fred Better OAM, survivor of and witness to the Jewish pogroms of the mid-20th century)

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APPENDICES

Appendix One: Scoping review

Table A1.1. Scoping review inclusion and exclusion criteria
Table A1.2. Search terms
Table A1.3. Full review of 34 papers
Table A1.4. Six included papers

Figure A1.1. Search strategy
Figure A1.2. Appreciative inquiry

Appendix Two: COREQ statement for qualitative research

Table A2.1. Consolidated research statement applied to this research

Appendix Three: Inclusion and exclusion criteria of sample

Table A3.1. Purposive recruitment inclusion criteria

Appendix Four: Recruitment materials

Appendix Five: Participant demographics

Table A5.1. Purposive sample
Table A5.2. Snowball sample

Appendix Six: Interview guide

Appendix Seven: Coding trees

Figure A7.1. Preliminary coding tree example
Figure A7.2. Theme building example

Appendix Eight: Thematic mapping

Table A8.1. Career related emotions
Table A8.2. Peer connection related emotions
Table A8.3. Emotions related to identity

Figure A8.1. Thematic mind map
Figure A8.2. Theory mind mapping

Appendix Nine: Ethics and amendments timeline

A background scoping review pre recruitment and pre data collection 2014–2015.

Identifying the need for the research

Broadly this structured review was based upon Arksey and O'Malley's approach to scoping studies for identifying a gap in the literature.(193) This thorough and detailed search assisted with providing a rationale for the progress of the exploratory research on peer connection.

Rationale

The rationale of finding the gap is to begin work in order to add to the current knowledge base of any discipline utilising a justified research proposal. The search was carried out between October 2014 and June 2015. Specifically, this thorough review identified if there had been any major work performed within the framework of the research question. The reason for this work was to establish a need for the research within this thesis.

Objectives

The objective was to explore the research questions of the role of peer connection in the occupational experiences of Australian GPs and how contexts within the GP workplace and Rogerian theory influence any of this process.

The framework for the literature search proceeded along a PICO construct. Given that the work was methodologically variable and heterogeneous, both interpretations of PICO were considered. Therefore the population (P) examined is GPs. The intervention (I) (quantitative) or phenomenon of interest (qualitative) is peer connection. The control (C) is dependent upon the study design and the context is active primary care general practice. The outcomes (O) are empathy, resilience or burnout. As peer connection is poorly characterised in the literature, peer isolation is used to characterise, by inverse inference, some of the complexities of the phenomenon of interest. A need to use a slightly broader or liberal scoping lens to identify the gap is noted.

Eligibility

The relevance of included studies retrieved from the academic databases was considered broadly for relevance to the research themes. Search terms were developed in conjunction with an

academic librarian at Monash University. The retrieved papers were narrowed down for relevance using the PICO criteria. Additional papers were retrieved from the author's own bibliography, the grey literature and bibliographic indexes of key papers. As this is an exploratory review, a broad view was taken of methodological processes. The inclusion and exclusion criteria are detailed and summarised in Table A1.1. The search strategy is detailed diagrammatically in Figure A1.1.

Table A1.1. Scoping review inclusion and exclusion criteria.

	Inclusion criteria	Exclusion criteria
Study design	Quantitative or qualitative studies Mixed methods	Literature or systematic reviews Opinion pieces or theoretical conceptual development Not English language
Population	General practitioners Family physicians Primary care medically qualified	Physicians (indeterminate or mixed) Physician assistants Nurse practitioners Medical students GPs in prevocational or vocational training Retired GPs Not in active practice GPs
Intervention	Any intervention or qualitative study of the major themes of peer connection As an inverse concept peer isolation GP to GP therapeutic alliance	Educational outcomes If not GP to GP peer relationship: GP to patient dyad or focus GP to specialist dyads GP to therapist focus
Outcomes	Empathy, resilience or burnout Mental health or psychological process of GP Wellbeing Satisfaction Quality of life	Failure to address or acknowledge all three major themes to a greater or lesser extent

Information sources

Between October 2014 and June 2015, the following databases were searched using the keywords and subject headings as detailed for PsycInfo in Table A1.1. The yield was Ovid Medline 384 studies, Cinhail 18 studies, Embase 1898 studies, PsychInfo 749 studies. The grey literature was searched in July 2015 and yielded only seven studies; the ERIC database was hand-searched due to low yield on the above search strategy and 10 studies were retrieved. The author's own reference library and hand-searching of the bibliographies of key papers retrieved the remainder. The search terms are illustrated for one of the databases in Table A1.2. The flow diagram for the search strategy is given in Figure. A1.1.

Table A1.2. Search terms for scoping review: PsycInfo database example.

Group 1. Population= GPs Keywords 23/02/2015	Subject headings
GP*	General practitioners
Primary care physician	Physicians Therapeutic processes Health personnel attitudes Medical education
General practit*	Nil
Family physician	Family physicians Family medicine
Family practiti*	Nil
Group 2. Intervention=peer connection and inverse terms =isolation Keywords	**Subject headings**
Balint	Focus on: general practitioners
Peer connect*	Focus on: computer mediated communication/ or *peer relations/ or *support groups/ or *peers/
Group process*	Focus on: *group psychotherapy/ or *social cognition/ or *group counseling/ or *interpersonal interaction/
Occupation* isolation	Nil
Occupation* alienation	Nil
Alienat*	Nil
Community of practice or virtual community of practice	Community of practice or virtual community of practice
Social capital	Social capital
Peer isolate*	Nil
Group supervis*	Nil
Group adj3 supervis*	Nil
Peer supervis*	Nil
Informal learning	Learning environment Professional development but in related terms (mentor, professional socialisation, continuing education)

Group 3 Outcomes=empathy, resilience and inverse terms like burnout Keywords	Subject headings
Empathy	Empathy
Resilien*	And resilience, psychological psychosocial factors
Burnout	Occupational stress
Wellbeing	Wellbeing
Vicarious trauma	Vicarious experiences Emotional trauma Fatigue Post-traumatic stress disorder Clinician mental health
Emotional exhaustion	Working conditions Organisational behaviours Self-regulation Emotional regulation
Fatigue	Fatigue
Compassion	Nil
Compassion fatigue	Focus on: Risk factors Health personnel Prevention
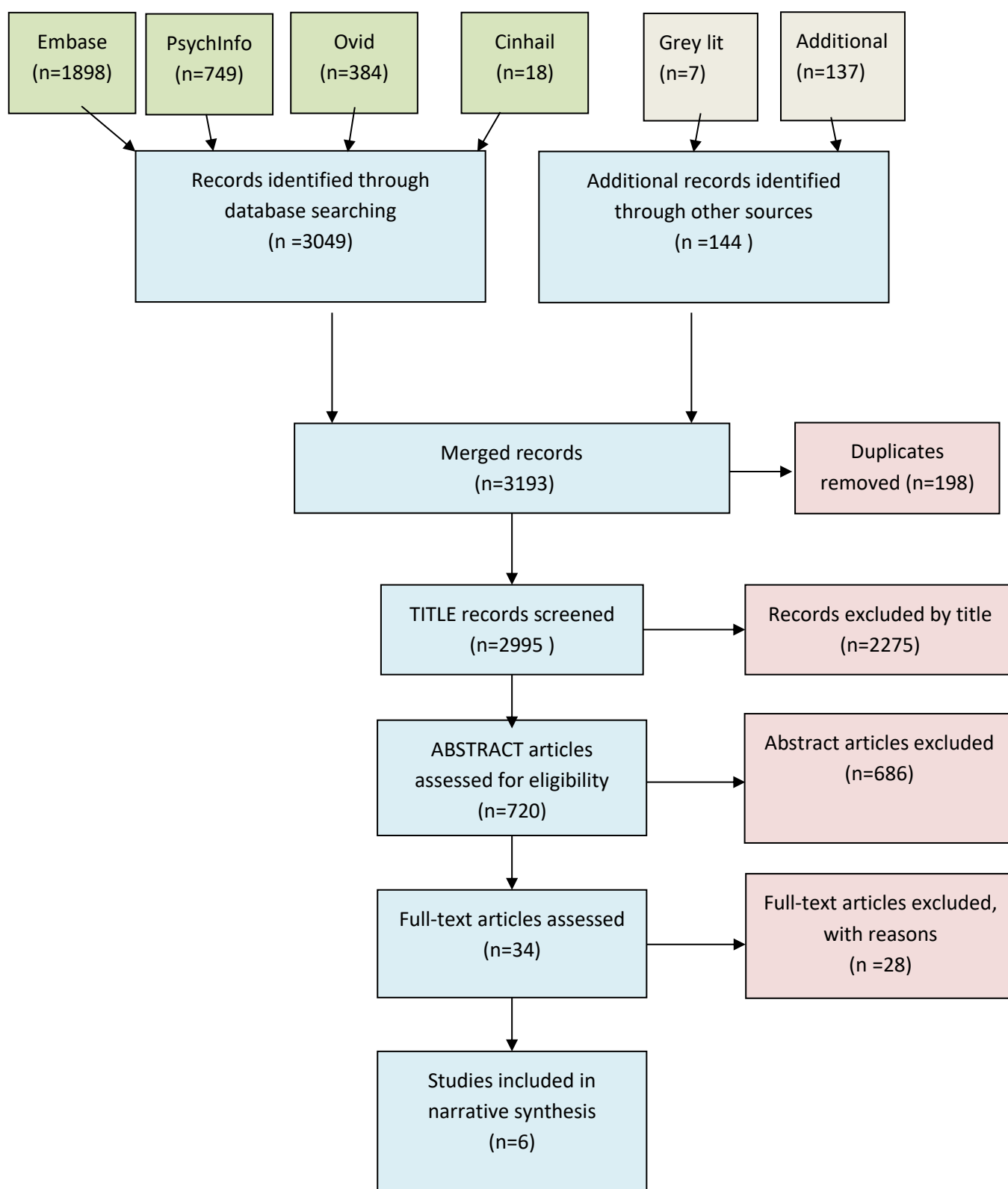
Figure A1.1. Search strategy flow diagram October 2014 – June 2015

Risk of bias

Risk of bias was not considered until the final synthesis of the last six studies. As this was a scoping review of findings before the thesis data was collected, methodological issues were not addressed until the final review. The reason for this is that it was suspected there was little in the way of literature regarding the therapeutic relationship between GP peers and if too rigid there would be no basis for review of any work. Publication bias is always acknowledged for those studies with a quantitative component and positive findings. Negative findings are under-reported and under-published so there are unknown unknown on exclusions for unpublished work. English-only papers were retrieved so studies from within the unique contexts of non-English speaking backgrounds were not included. This brings a particular ethnic interpretation to the mostly Western world papers and is a limitation.

Study selection and characteristics

These have been tabulated into Table A1.2 which includes all 34 studies for full text review. As there was a mixed methodology for the studies, a table outlining both the mixed PICO approach and phenomena of Interest has been constructed. Reasons for rejection are included within this table. Inclusions and exclusions are documented in Table A1.1.

After this review of 34 papers by full text, six papers were found to meet the inclusion criteria. These six papers are described next.

Papers addressing the research question

In order to understand any work that may have already been performed on the research question six studies are now reviewed. Using a very narrow scoping lens would have generated one paper derived from a subsequent study being first a quantitative study (Krasner and Epstein) followed by a qualitative study (Beckman).(5, 9) The discussion is broadened slightly to include the other four papers as these provide useful insights in what appears to be an obvious gap within the current medical literature at this time. The papers are a mix of three qualitative studies: Beckman; Jensen; and one case study, Nielsen.(5, 56, 125) The other three papers are quantitative: Krasner; one pilot study; and Fortney and Winefield, being a quantitative study but with some open questions.(9, 57, 58) Due to the heterogeneity of study design, the context and the exploratory nature of this

work, a narrative synthesis is used. There is an attempt to make sense of the need for further work based on the early work presented within the final six papers.

Idea webbing and concept mapping are considered to be reasonable approaches by Popay in synthesising data from heterogenic studies including qualitative papers and accordingly for this thesis, this method was used to represent the research gaps.(194)

Discussion on included papers: PICO

Participants: setting of general practice versus primary care

The setting of general practice is considered important in a sociocultural view given the variation for exposure to other medical peers informally or formally. The studies by Krasner, Beckman and Fortney were USA based and these participants, although called "family physicians", may differ considerably from the small private practice GP that characterises Australian general practice.(5, 9, 57) In European GP settings (Nielsen) and Canadian GP settings (Jensen), the study participant GPs had a more similar workplace context to Australia.(56, 125) Winefield was the only Australian study on GPs that met inclusion criteria.(58)

In the USA, family physicians may have hospital affiliations and see a restricted patient list based on whether they are obstetricians, gynaecologists, paediatricians or internal medicine practitioners. Hospital environments more typically have more opportunities for formal peer meetings. The Danish GPs had a funding model allowing GP-led peer groups and these were examined in a case study by Nielsen; however, there is no current funding model for GP-peer groups in Australia.

These organisational, structural and political barriers to peer connection were mentioned by Nielsen, Winefield and Beckman.(5, 58, 125) The participants needed to be in primary care and the paper needed to at least address each of the research question themes to some extent even if only one of the thesis themes was the main topic.

Intervention or phenomenon of interest

The studies including Beckman, Fortney, Jensen, Krasner, Nielsen and Winefield are of various designs, strengths and applicability.(5, 9, 56-58, 125) In all the studies there was no direct look at GP peer connection other than describing it as simply existing or utilising it as a moderator or method to deliver a particular intervention. Only Krasner and Beckman considered peer connection might be an intervention rather than the mindfulness program described.(5, 9)

Peer connection was structured formally for the purposes of physician therapy in Nielsen with the effects on GP burnout and wellbeing examined.(125) The discussion by Nielsen was directed at the process of therapy delivered by an experienced facilitator on the outcomes of wellbeing and avoidance of burnout. There was no characterisation of the process of peer-to-peer intervention or qualitatively any consideration of moderation of outcomes related to relationships between peers.

Fortney's study went further to characterise peer connection as being a component of the intervention of mindfulness and subsumed it conceptually within mindfulness.(57) Fortney's USA-based mindfulness study was a pilot and the participants were not transferable to the setting of Australian general practice.(57) In conjunction with the blurring of themes and failure to recognise the possibility of the relational therapeutic nature of peer-to-peer contact, this study by Fortney is considered to be a study of contrasts rather than concordance with the research question. Its validity of the construct, along with the internal and external limitations on validity, severely limit the usefulness of the Fortney study.(57) However, it was included to demonstrate the situation of the literature themes and it demonstrates how often the peer relationships are assumed.

However, Jensen from Canada was able to conceptualise peer-to-peer connection as a separate theme supporting the study phenomenon of resilience.(56) Jensen reported "supportive relations" as occurring in multiple domains such as: education, mentoring, professional networks and structured in work routines. Jensen, however, was focused on the facilitated and formal process of therapeutic groups rather than the relational peer connection or informal "supportive relations". For most studies reviewed so far, it seems common that a "process" or "outcome" rather than a "relation" is examined.

The study by Winefield was a small Australian pilot using quantified scales to examine a group process for the purposes of stress reduction in women GPs.(58) The internal validity was low; however, the process was exploratory for the purposes of intervention development.(58) Winefield implemented a before and after study design utilising at least the skills of a registered psychologist and included relaxation techniques in a GP peer group. The intervention therefore was formal and complex, and peer connection may have been involved in altering some of the outcome measures; however, as noted by the author this was unable to be clarified.(58)

Control and outcomes; alternatives for qualitative studies

Notably control and outcomes of the PICO method are rarely suitable for use in qualitative studies.(194, 195) The studies here did not always use control groups and rarely comparison groups. Outcomes were not the same definition as a quantitative outcome as identified by Cooke.(195) This is acknowledged and other terms such as setting, sample, research design and evaluation are used broadly within this assessment of studies of varied methodological orientation.

The quantitative study by Krasner, for instance, allowed that peer connection may have moderated outcomes on the impact of mindfulness rather than the mindfulness itself.(9) The Krasner study is important as it led to another follow-up qualitative study by Beckman to explore the role of peer relationships upon the outcomes. This recognition led to a qualitative interview of a subset of the same study participants by Beckman. In this follow-on study, 75% of participants identified in semi-structured interviews that "peer connection" was a powerful and positive experience.(5) In addition, this "positive connection" appeared to be enabled at multiple levels:

1) An *intra-personal* disposition of the participant practitioner towards reflexivity

2) An *inter-personal* disposition towards others

3) A *workplace level of organisation* including a safe emotional *culture* that enabled this to occur

This remains the most useful single study addressing the strength of peer relations as an independent phenomenon and notably encompasses two papers, Krasner's and Beckman's.(5, 9)

In summary, peer connection as an experience or intervention is not well characterised within the literature. There is scope for both concept development and framing of peer connection occurring

between GPs. Interventions are rarely designed to examine peer connection separately as a moderator of burnout and promoter of resilience.

However, without conceptual understanding of concepts involved, interventions will most likely remain complex and poorly clarified. Mostly peer connection is considered within the realm of formalised therapy sessions which are hierarchical and utilise a skilled facilitator on a self-selected group.(56, 125) Informal and non-facilitated peer-to-peer interactions are not well examined. There is no descriptive or theoretical development of a positive therapeutic relationship between GP and GP in informal or education settings. Peer connection is more often framed, if at all, as a remedial facilitation where the tool is "therapy" to recover from burnout rather than as a therapeutic alliance to preserve or develop resilience.

There is a significant body of work looking at burnout and therapeutic groups.(56, 58, 125) But it is not known which GPs if any use a process of peer connection, although both Krasner and Beckman clearly raised this as a possibility worth exploring. The gaps consisted, therefore, of understanding the opportunities for peer connection occurring in informal settings. It is notable that education activities account for a significant amount of dedicated professional time.(12) Informal settings might include but are not limited to educational activities.(37) Thus the roles and context of the GP peer relationship to my knowledge have had no exploration.

Two papers warranting close examination

In the "Association of an educational program in mindful communication with burnout empathy and attitudes among primary care physicians" by Krasner, the stories and experiences of clinical practice were shared in pairs or small groups of trusted peers. Narrative medicine written techniques were utilised along with the appreciative inquiry relational techniques (Figure A1.2) to focus on and understand the physician clinical experience.
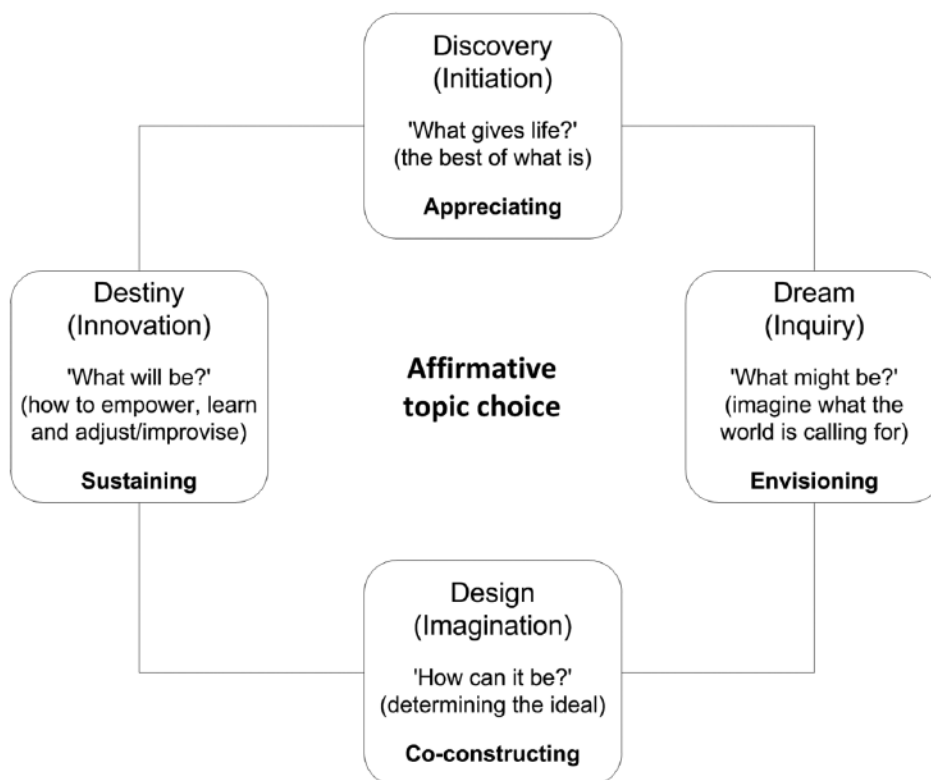
Figure A1.2. Appreciative inquiry model

The purpose of appreciative inquiry "proposes that analysis and reinforcement of positive experiences are more likely to change behaviour in desired directions than an exploration of negative experiences of deficiencies".(9, 196) Thus utilisation of the phenomenon of trusted peer relationship and an interpersonal relational sharing or therapeutic alliance, rather than the formal intrapersonal mindfulness meditation, was explored further in a qualitative study by Beckman as a follow-up of a quantitative study.(5, 9) The quantitative study by Krasner was a before and after study so some limitations can be seen in the self-selected non-randomised physician sample.(9) Within the Krasner study, empathy was defined by the Jefferson Scale of Physician Empathy which, as previously shown, relies heavily on the cognitive arm of empathy.(9, 197) The prosocial affective and affiliative parts of empathy are not measured well by the JSPE scale and may well be underappreciated within this research.(79, 80, 197)

Peer connection, therefore, remains unexplored within the literature. The purpose of this thesis is to advance this limited understanding and provide an exploration within burnout, resilience and empathy frames. The previous research concentrated on the interventions and cognitive approaches towards the alleviation of burnout and development of resilience rather than considering relational affective and affiliative approaches. This thesis aims to explore a socially

constructed and mediated concept of peer connection as a distinct relational social construction utilised to develop, enhance and maintain resilient and empathic GPs. The gap has been clearly identified and the rationale for the benefits and outcomes established.

Conclusion

Thus, a review of the literature has carefully evaluated the historical development of the main themes and then the current work within them. It has been noted that empathy and burnout are well established within the literature, that resilience is a developing concept and that peer connection has little articulation particularly for post-training GPs.

Thus, there is a gap for the development of this theme and an exploration of its roles in established GPs seems warranted. This thesis is a preliminary exploration of the theme of peer connection within the Australian context of general practice.

Table A1.3. Papers selected for full text review

Papers selected for full text review						Phenomenon of Intent			
Paper	Type of Study And Setting	Population	Intervention	Control	Outcomes	Peer connection (Type) Or Isolation (Type)	Empathy (Definition)	Burnout or Resilience (definition)	Comments
1. Ahrweiler F, Neumann M, Goldblatt H, Hahn EG, Scheffer C. Determinants of physician empathy during medical education: hypothetical conclusions from an exploratory qualitative survey of practicing physicians. BMC medical education. 2014;14(1):122.	Qualitative short Survey Open Ended Questions Germany	Physicians-mixed disciplines Internal medicine General Medicine Paediatrics Rehab-ilitation Neurology Surgery n=42				Connection (medical education)	Yes Mercer and Reynolds definition.	Partial (Stress and wellbeing self report)	2014 **REJECT** Did not separate out General Practitioners Interesting comments on +/- of peer connection depending on modelling
2. Aira M, Mäntyselkä P, Vehviläinen A, Kumpusalo E. Occupational isolation among general practitioners in Finland. Occupational Medicine. 2010;60(6):430-5	Qualitative In depth interview descriptive Finland	GPs n=32				Isolation Self report And peer support Clinical support	NO	Partial (stress un-certainty and Wellbeing)	2010 **REJECT** Peer connection was the only examined variable. Mentioned systems supporting protected time in clinical teams

3.	Bakker AB, Schaufeli WB, Sixma HJ, Bosveld W. Burnout contagion among general practitioners. Journal of Social and Clinical Psychology. 2001;20(1):82-98.	Quant-itative Descriptive statistics and Lisrel Nether-lands	GPs n=507 84% men 16% women	1.Emot-ional Contagion Scale (6 items) 2.Burn-out com-plaints scale (2 items) and 3.MBI (omitting items 12 and 16)	NO	+ve correlation Emotional contagion to Emotional exhaustion +ve correlation b/w emotional exhaustion (MBI) and burnout complaints scale only if high on emotional contagion scale	Specula-tively by way of emotional contagion but process not defined	No	Yes MBI scale	2001 **REJECT** Emotional contagion not well defined Peer Connection not well defined Non defined form of empathy relates to emotional contagion Aim was to establish a model and scale for emotional contagion.
4.	Beckman HB, Wendland M, Mooney C, Krasner MS, Quill TE, Suchman AL, et al. The impact of a program in mindful communication on primary care physicians. Academic Medicine. 2012;87(6):815-9.	Qualitative Semi-structured interviews (after mindfulness intervention study n=70) New York USA	Primary care physicians USA n=20 (out of 70)				Profess-ional Isolation one of main themes	Not specifically but discussed self report of empathy and patient centred care more of this was discussed in the quantitative part of this study which was reported in a second paper.	Burnout prevention was a primary motivator	2012 **INCLUDE** Mindfulness was the intervention yet it seems that the +ve peer connection surprised both the researchers and the participants in its power to "heal" or provide a healing/reflective environment
5.	Benson J, Magraith K. Compassion fatigue and burnout: the role of Balint groups.	Literature review Australia	GPs				Isolation being a risk factor for compassion fatigue and burnout	Empathy being maintained and usefully described	Burnout and resilience	2005 **REJECT** Literature Review Main subject was Balint as a therapy

	Australian Family Physician. 2005;34(6):497-8.							as being in tension with detach-ment.		
6.	Brondt A, Sokolowski I, Olesen F, Vedsted P. Continuing medical education and burnout among Danish GPs. British Journal of General Practice. 2008;58(546):15-9.	Quantitative Cross sectional Self report Survey Denmark	GPs N=379	MBI Scale and Self Report CME partic-ipation	NO	Burnout had +ve associations with non-atten-dance at CME. That is CME attendees had less burnout	Peer connection implied via CME partic-ipation	Empathy not mentioned	Burnout discussed	2008 **REJECT** No Empathy and a limited discussion based on cross sectional design al-though patient centred care theoretically discussed but not measured an outcome
7.	Brown NA. Effects of age, gender, and social support on emotional health and burnout in physicians [M.A.]. Ann Arbor: Dalhousie University (Canada); 2006.	Thesis (masters) Quantitative Randomised Canada 2006	Physicians N=82 included family physicians but did not stratify	MD Health e-coach program	YES	MBI SSQ social support And GHQ7 General health Gender	GENDER related	NOT	Yes	2006 **REJECT** Interesting on the basis of social support measures but unable to determine the contribution of Family Physicians and each group <15 participants so not generalizable even if available
8.	Bruce SM, Conaglen HM, Conaglen JV. Burnout in physicians: A case for peer-support. Internal Medicine Journal. 2005;35(5):272-8.	Quantitiative Validated survey instruments New Zealand	Physicians NOT GPs N=50	Survey MBI GHQ12 Mistakes and need for support questions	No	Increased risk of physicians with burnout	Peer support	NO	Yes MBI	2005 **REJECT** Not GPs More clear in the full text although references journal articles describing peer support groups in GP research papers.

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9.	Cataldo KP, Peeden K, Geesey ME, Dickerson L. Association between Balint training and physician empathy and work satisfaction. Family Medicine. 2005;37(5):328-31.	Quantitative Cross section survey USA	Family physicians N=104	Jefferson physician Scale for empathy And Work satisfaction Survey	Yes but self selec-ted and not rand-omised	Balint group participation had a + correlation with work satisfaction No differences in Empathy as measured	Not addressed although Balint provides this	Empathy scale was the Jefferson So just one component of EQ (perspective taking)	NO	2005 **REJECT** Did not look at peer connection at all. Empathy scale incomplete and work satisfaction scale not relevant
10.	Chambers R. Resisting burnout in doctors. Hong Kong Practitioner. 2006;28(6):261-5.	Quantitative Cross sectional Survey Hong Kong N=226	Public Health Doctors	MBI	No	31.4% = definition of high burnout Single 5 point job satisfaction score correlated with all subscales of MBI	No	No	Burnout with demographic representation of variables	2006 **REJECT** Hospital setting Included as public health Doctors was ambiguous
11.	Davis D, Thomson O'Brien MA, Freemantle N, Wolf FM, Mazmanian P, Taylor-Vaisey A. Impact of formal continuing medical education: Do conferences, workshops, rounds, and other traditional continuing education	Systematic search and literature review 1999 Canada	Physicians unspecified American French Canadian 5 studies on family physicians				Peer connection via formal CME (didactic or interactive) But not explicitly looking at peer to peer dyads. No relationship b/w group size and learning outcomes	No Empathy	No Burnout or Resilience	1999 **REJECT** Metanalysis and physician behaviour change outcomes Mentioned physician to physician factors as a variable not understood or studied. A useful reference or two in the bibiliography

	activities change physician behavior or healthcare outcomes? JAMA: Journal of the American Medical Association. 1999;282(9):867-74.									
12.	Eklof M, Torner M, Pousette A. Organizational and social-psychological conditions in healthcare and their importance for patient and staff safety. A critical incident study among doctors and nurses. Safety Science. 2014;70:211-21.	Qualitative 2014 Purposive sample with x4 focus group inter-views Inductive thematic analysis Sweden	Swedish physicians And nurses N=36				No	No	Commented that psych-ological overload was a more salient issue with respect to safety factors than physical overload	2014 **REJECT** Not general practice based
13.	Eubank DF, Zeckhausen W, Sobelson GA. Converting the stress of medical practice to personal and professional growth: 5 years of experience with a psychodynamic support and supervision group. Journal	Qualitative Case Study Boston USA 1991	Family physicians N=7	Peer supervision and support group	No	Improved well being Self report	YES Realtionships important re trust Confidentiality Psychodynamic, psycho therapy and support model described	NO	NO	1991 **Reject** May be useful to frame the particular theory behind the relationship structure

of the American Board of Family Practice. 1991;4(3):151-7; discussion 7-8.									
14. Fortney L, Luchterhand C, Zakletskaia L, Zgierska A, Rakel D. Abbreviated mindfulness intervention for job satisfaction, quality of life, and compassion in primary care clinicians: A pilot study. Annals of Family Medicine. 2013;11(5):412-20.	Quantitative Pre –post design Single Sample USA 2013	Primary care** physicians N=30 **USA definition includes paediatricians, internal medicine as well as family medicine specialists Family medicine included Medically qualified as well as physician assistants, drs of osteopathyor nurse practitioner N=30	MBSR 8 week inter-vention program Mindful-ness Short vs long progam X4 different Follow up Qns Scales used MBI DASS 21 PSS RS-14* SCBC			The researchers characterised minduflness are inherent aspects of peer support and and peer interaction	Compassion not empathy although included prosocial aspects of empathy and may be a more constrained way of dealing with a form of empathy	MBI looked at as well as RS-14 resilience	2013 **INCLUDE** But cautions on the subjects given that participants are: 1.not clearly defined in the USA and not able to be differentiated on response. 2.small sample and 3. poor characterisation of peer support/interactions as separate to mindfulness. A mixed sample and mixed issues around peer support no empathy so really just MBI/RS14
15. Gardiner M, Sexton R, Durbridge M, Garrard K. The role of psychological wellbeing in retaining rural general	2005 Mixed methods AUSTRALIA	GPs Rural N=187	Questionnaire Relating to Demographics Support services Psychological health	Question naires	Male>female Unwilling to use crises support CME patient care but unmet need for personal coping skills	Isolation yes especially from other GPs in a personal sense to discuss specific job stress of GP	Not mentioned	Burnout and resilience discussed but not specifically measured	2005 **REJECT** No Empathy discussed However Australian setting

practitioners. Australian Journal of Rural Health. 2005;13(3):149-55.			measures x4 Contemplation to leave Qn and General free hand comments		Unmet need for social support from OTHER GPs 16% strong isolation Moderate to high quality of life 50% intention to leave rural Small but significant relationships between social support and intention to leave and well being				Unique comments around the specific need for peer support Reasonable sample size
16. Jensen PM, Trollope-Kumar K, Waters H, Everson J. Building physician resilience. Canadian Family Physician. 2008;54(5):722-9.	Qualitative Indepth interviews by a peer Descriptive Canada 2008	Family physicians N=17	In depth iv with peer	No	Characterising resilience further	Peer support from colleagues in a CME environment was one factor	Empathy no but did discuss self awareness and tolerance for own humanity A form of self empathy	Resilience not burnout	2008 **INCLUDE** Limitations small size, descriptive and qualitative measures
17. Joyce C, Veitch C, Crossland L. Professional and social support networks of rural general practitioners. Australian Journal of Rural Health. 2003;11(1):7-14.	Qualitative Indepth semi structured interviews Australia	Rural QLD GPs Purposive sample N=17	In depth semi structured interview	No	Characterising "networks"	Peer support and isolation characterised by structural and role exploration	NO	NO retention in rural environments and intention to stay only	2003 **REJECT** Empathy Burnout and Resilience not discussed Very much exploratory and structural rather than role of or process during peer to peer interactions

# / Citation	Study design	Population	Intervention / Variables	Measures	Findings	Social support / Isolation	Peer support / Empathy	Burnout	Decision
18. Koleck M, Bruchon-Schweitzer M, Thiebaut E, Dumartin N, Sifakis Y. Job stress, coping and burnout among French general practitioners. European Review of Applied Psychology / Revue Europeenne de Psychologie Appliquee. 2000;50(3):309-14.	Quantitative Survey France 2000	General Practitioners N=200 ONLY MALES	Burnout (MBI) Job satisfaction	NO	Emotional exhaustion predicted by addictive behaviour Problem focussed coping and social support seeking mediates acoomplishment and job satisfaction	Obliquely described as social support seeking but not clarified if this was peer to peer support No specific definition	NO	Burnout	2000 **REJECT** No Empathy Outcomes not relevant to my study and not able to be clearly defined And sample was male only.
19. Krasner MS, Epstein RM, Beckman H, et al. Association of an educational program in mindful communication with burnout, empathy, and attitudes among primary care physicians. JAMA. 2009;302(12):1284-93.	2009 Quantitative (partner study to qual study) Survey before and after design New York USA	Primary care physicians N=70	Mindfulness program PLUS appreciative Inquiry and narrativewith a PEER	MBI Mind-fulness Empathy Psycho-social orientation and Mood NO CONTROL/comparator	Improvements in Burnout Mindfulness Mood disturbance Empathy (PT) Short term and sustained	Peer support Only as a possible post hoc analysis	Empathy yes but Jefferson physician empathy scale	MBI	2009 **INCLUDE** Discussed peer support, empathy and burnout.
20. Kushnir T, Cohen AH, Kitai E. Continuing medical education and primary	Quantitative Self report questionaire	Primary care physicians N=385 BUT Family physicians	**Independent variables** CME Activities Opportunites to update	No but had some separation from paediatricians	CME -ve with job stress +ve with job satisfaction	Isolation specifically discussed But really just as something that	NO	Yes burnout but not as an MBI scale + things like job stress etc..	2000 **REJECT** No Empathy Not a great separation of family physicians from GPs.

physicians' job stress, burnout and dissatisfaction. Medical Education. 2000;34(6):430-6.	Israel 2000	were n=183/225 Not all were physicians	Demographics **Dependent variables** Job stress Burnout Job satis-faction		Opportunities For updates Marginally with job stress And -ve for burnout	needed further study Concentrated on the factual accumulation of knowledge and skills (agency)			Plus suggestion some were not physicians. PLUS isolation again considered but not specifically characterised or discussed preferring to stick to the agency schema of collecting knowledge and skills as a means of improving job efficacy.
21. Lamothe M, Boujut E, Zenasni F, Sultan S. To be or not to be empathic: The combined role of empathic concern and perspective taking in understanding burnout in general practice. BMC Family Practice. 2014;15(1).	Quantitative France	General Practitioners N=294	Jefferson pshycian scale of empathy And Toronto Empathy question-aire	NO	Perspective taking (JPPE) more important than Empathy concern (TEQ) For burnout prevention but both are necessary	Peer connection NONE characterised and did not mention this confounder when quoting epstein	Jefferson physician scale for empathy and Toronto scale for GRRR sympathy or empathic concern Really a confused characteris ation of empathic concern assuming that there is a safe level of use and conflating elements of too much EC with PD Relied heavily on	MBI yes mentioned and nicely incorporate mindfulness and narratives as cognitive contsrreucts to """help""" With emotional regulation But as noted in the paper scribbles I-It (PT) To I-thou (PT) To I-thou-mine (EC) And I-contaminate d mine (PD)	2014 **REJECT** No peer connection. Empathy definitions and subscale characterisations and Toronto Empathy Scale Definitions of empathy considered to be problematic. As this author has not really characterised this well

								Hojats characterisation of empathy which IMHO is a gendered biased view.		
22. Lee FJ, Brown JB, Stewart M. Exploring family physician stress: helpful strategies. Canadian Family Physician. 2009;55(3):288-9.e6.	Qualitative Indepth interviews Canada 2009	Family Physicians N=10 Key informants purposive	Interview	No	Better to be proactive than reactive Framework for understanding Stressors in 3 levels Personal Organisational & Healthcare system	Connected-ness at a personal level. Collegiality and support at an organisational level	NO	Resilience focus as prevention of Burnout strategies explored Proactive planning >>reactive manage-ment strategies	2009 **REJECT** no mention of empathy Reasonable on the Peer Connection but no mention of Empathy.
23. Lelorain S, Sultan S, Zenasni F, Catu-Pinault A, Jaury P, Boujut E, et al. Empathic concern and professional characteristics associated with clinical empathy in French general practitioners. European Journal of General Practice. 2013;19(1):23-8.	Quantitative France 2013	French GP N=295	JSPE TEQ Reg-ression analysis Depen-dent variable = clinical empathy With practice charac-teristics	No	JSPE is related to TEQ One reflective activity moderated the effect	Peer connection absolutely blind to this other than CME concept-ualised as a skill and a process Balint =medical commun-ication	Yes but same as the other French study (same study different aims)	Resilience or burnout Characterise d only that too much EC may lead to burnout an assumption which I fundamentall y disagree with	2013 **INCLUDE** However limited interpretation of peer connection.

24. Lichtenstein A. Integrating intuition and reasoning - how Balint groups can help medical decision making. Australian Family Physician. 2006;35(12):987-9.	2005 Australian Descriptive Not a study								2006 **REJECT** Balint description and theory.
25. Lipsitt DR. Michael Balint's group approach: The Boston Balint group. Group. 1999;23(3-4):187-201.	Descriptive of process Not a study Not obvious until read the full text that was available								1999 **REJECT** Harvard professor of psychiatry descriptive accounts of the theory of Michael Balint
26. Margalit AP, Glick SM, Benbassat J, Cohen A, Katz M. Promoting a biopsychosocial orientation in family practice: effect of two teaching programs on the knowledge and attitudes of practising primary care physicians. Medical Teacher. 2005;27(7):613-8.	Semi quantitative Randomised Before and after design Israel 2005	GPs N=44	Teaching inter-vention Short term family therapy Teaching didactic Versus Teaching inter-active Independent variable= type of teaching program Depen-dent variables: -Learners know-ledge -Intent-ions	Didactic Vs Inter-active No control	Burnout increased Knowledge improved in both BUT Inter-active >>knowledge c/f didactic style of teaching Increased self- esteem and Change in attitudes and management Increased patient satisfaction in both groups	Peer connection Relation not mentioned Balint was patient centric conceptualised And peer connection was again task directed to CME and not based on the interactivity	Empathy Not mentioned	Modified Burnout Measured by 5 Likert items from Maslach and not the full MBI	2005 **REJECT** No Empathy Interesting only for the perverse finding of increased burnout post study which authors could not explain. I note this intervention was 72 hours over 12 weeks (4-6 hours per week) Plus a test at every week. Although not mentioned this intensity might be a part Plus had a 102 item questionnaire!!

			-attitudes						Primarily looking at teaching methods for CME in adult learners
27. May HJ, Revicki DA. Professional stress among family physicians. Journal of Family Practice. 1985;20(2):165-71.	Quantitative Survey 128 item USA North Carolina 1985 In monash library	Family physicians Residents N=116 Faculty N=32 Private practice N=330 Total N=478	Physician Stress Inventory Zung depression Scale Marlowe-Crown Social desirability Scale Internal-External Locus of control Scale (Rotter) Idealism Scale Social Support items	No but Inter-group Com-parisons	Residents Higher degree of work-family interference High External locus of control Medium idealism Moderate family support Faculty Lowest family support External locus of control Highest idealism Private Practice Lowest idealism Internal locus of control Highest family support	Peer Connection Scale of social support supposedly measured social supports but this only characterised family support and referred to another article on Peer support	Empathy NO	Burnout Mildly and characterised BO as Physician stress	1985 **REJECT** A really interesting paper coming as it did early in the Burnout Lit time frame Attempted to characterise a model of physician stress Limitations Did not refer to empathy or patient centred care None of the scales used are those that I am using Skimmed over peer connection despite one result stating that peer connection seemed to moderate the physician stress response Clearly written by a clinician who had a good grasp of the complexity of practice.
28. Nielsen HG, Soderstrom M. Group supervision in general practice	Quantitative 55 item Question-naire	GPs N=215 Higher proportion of	Non validated 55 item question-naire	Nil	Women participated in supervision more than men and also	Peer connection Formalised Rightful question about whether	NO	Theoretical not measured Extrapolate from job	2012 **REJECT** No empathy mentioned.

as part of continuing professional development. Danish Medical Journal. 2012;59(2):A43 50.	Denmark 2012	women responded			responded more Expressed difference in needing professional relief May provide burnout prevention?	supervision or peer connection (not determined needs more study)		satisfaction Non validated	Cautious conclusions on burnout prevention Raised interesting gender and peer supervision vs CME questions only Note partner study
29. Nielsen HG, Tulinius C. Preventing burnout among general practitioners: is there a possible route? Education for Primary Care. 2009;20(5):353-9.	Qualitative Case Study Interviews and participant observation Phenomenolo gic-hermenuetic tradition. Denmark 2009	GPs N=7	Inter-views	No		Peer connection Not fully characterised and discussed Skills or therapy based	Briefly and in passing Neither defined examined or characteris ed	May play a role in burnout prevention based on two GPs deciding to stay in practice	2009 **INCLUDE** but limited conclusions Exploratory Mentioned need to study CME groups Noting this was formally structured and formal supervision
30. Post DM. Values, stress, and coping among practicing family physicians [Ph.D.]. Ann Arbor: The Ohio State University; 1992.	Thesis Qualitative Phenomenolo gical inquiry 1992 Ohio USA	Family Physicians Ohio N=10				Not specificallyother than a nebulous Collegiate support Nor characterised in the literature review. Often enmeshed with all forms of social support such as family/ Friends	Empathy NO Altruism briefly in terms of discussing value clashes in an organ-isational sense	Burnout No Stress discussed as a multi-dimensional model Resilience and coping described but not well characterise d	1992 **REJECT** No empathy Organisational review. Often issues relating to the unique USA setting Not enough of the phenomenon of interest within this study
31. Richardsen AM, Burke RJ. Occupational stress and job satisfaction	Quantitative 1991 Canada	Canadian Physicians	Self administere d Questionnair e	No and not stratified by	Sources of occupational stress; On call time				1991 **REJECT**

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among Canadian physicians. Work and Stress. 1991;5(4):301-13.	Published online2007	N=2584 10% women GPs included	Stress measures Versus Satisfaction measures	profession	Total hours worked Need to find time for CME Major sources of Job satisfaction; Relations with patients Relations with colleagues Ability to treat illness				Not stratified by profession Outcome measures not suitable Interesting comments only about satisfaction with peer relations
32. Taubert M, Nelson A. Heartsink encounters: a qualitative study of end-of-life care in out-of-hours general practice. JRSM Short Reports. 2011;2(9):70.	Qualitative Semi structured interviews South Wales UK 2011	GPs Out of Hours care providers only N=9 Inter-pretative Phenomen-onology			Emotional Difficulties of Palliative care patients	Poorly charac-terised	Minimal discussion and no definition	Alluded to difficulties not charac-terised	2011 **REJECT** Described a need for emotional debriefing as "housekeeping" and reflective moments being needed Noting the isolation of peer relationships in Locum OOH provision but not characterised
33. Truchot D. The burnout syndrome among GP: Influence of perceived inequity and communal orientation. Annales Medico-Psychologiques. 2009;167(6):422-8.	FRENCH LANGUAGE								2009 **REJECT**

34. Winefield H, Farmer E, Denson L. Work stress management for women general practitioners: An evaluation. Psychology, Health & Medicine. 1998;3(2):163-70.	Mixed methods Quantitative Exploratory Pre-post design Mixed 1998 Australia	Women GPs N=20	3X3 hour sessions on stress Mx. Measures Psycho-logical distress Job satis-faction MBI Value of Sessions Thames Inter-active Course Rating Scale Open ended questions	NO	High Psychological distress at entry decreased Higher levels decreased more (or regressed twd mean) Higher improvers for Psych Distress valued peer discussion more. MBI showed high EE Moderate DeP High PA Older women less distressed Decreased EE after the seminars	Peer connection Through discussion groups focussed on problem solving for workplace stress	NOT discussed But see note on paper as the improvers in stress found the peer group particularly helpful rather than the session content** Hard to say without a control Consider Prosocial elements	MBI Pre test results only Could not see post test results	1998 **INCLUDE** Interesting findings given that the intervention was peer discussion Educative flavour rather than counselling Limited if any Empathy. Limted by N=20 and no control MBI data suggestive and replicates prevalence in many other studies. No Men.

Table A1.4. Six included final papers analysis.

Paper	Study Characteristics	Intervention or Phenomenon of Intent	Relevance (and context)	Key Results	Dimension of Peer Connection	Conflicting or Contributing to Theory
Beckman (2012)**(5)**	Qualitative semi structured interviews n=20 Post intervention Second Paper of Paired study original (Krasner 2009) Looked at Empathy and Burnout/Resilience	Impact of a Mindfulness Program on Physician Well Being Phenomenon Well being 52 hours of communication and mindfulness training including; X8 weekly sessions X1 seven hour silent retreat X10 monthly sessions Appreciative Interviews with Peers Interviewed in 2008	Primary Care Physicians in one setting in New York, USA. May not translate to Australian GP. 75% of participants found connecting with Colleagues was one of the most 'meaningful' parts of the program Non-judgemental and emotionally safe environment was key to participants **Internal Validity Moderate** Study Question: What contributes to Physician Wellbeing- partly answered by Key Results But a Complex intervention & Scope	Sharing with Colleagues reduced isolation No longer felt alone. Mindfulness improved patient communication and adaptive reserve Greater self- awareness was developed but difficult to achieve in context of medical practice both physically and politically.	The result of peer connection was surprising to the original study authors (Krasner- 2009) This qualitative review constructed the dimension of peer connection as reduction of geographical and social isolation rather than in a transformational relational or actualising sense. Emotional safety and Trust were key.	Remains exploratory that peer connection has a strong correlation to physician wellbeing. Identification of peer to peer connection as a positive phenomenon. Provides little analysis of the conceptual or theoretical framework of the phenomenon of peer to peer therapeutic alliance. Peer connection seems dependent upon reflective personal qualities, interpersonal skills, suitable emotional environment and organisational structure of workplace and health system. **External Validity Moderate** Conflicting in that the workplace of Primary Care Physicians may not reflect the context of Australian General Practice.
Fortney (2013)**(57)**	Quantitative Pilot Pre –Post design n=30 Empathy/Compassion	Impact of an 18 Hour mindfulness program on Primary Care Clinicians Burnout, anxiety, stress,	Relevance: Very difficult to interpret and separate the mindfulness from the concept of peer	MBI Emotional Exhaustion scores became less at 8 weeks and 9 months	Equated and explained using the concept of mindfulness.	Peer interaction and support characterised by the authors as being inherent parts of mindfulness

	(SCBC scale) Burnout (MBI Scale) Resilience (RS-14 Scale)	resilience and compassion measures Intervention: Trained instructors in 2 groups of 15 participants Modified MBSR program Shared experiences in a peer group post program Non-residential weekend and 2 evening sessions Website support for Mindfulness Patient Centred Communicaton Techniques Measures at Baseline 8 weeks And 9 months post intervention	care connection and interaction **Internal Validity LOW** SCBC scale validated in the General population Small sample size underpowered study therefore P values and significance are not generalizable but descriptive. Bias: Lack of a control Investigators addressed participants describing caring for colleagues and the role of peer interaction and support.	Depersonal-isation became less at 8 weeks and 9 months Personal Efficacy Improved at 8 weeks and 9 months p values <0.05 but n=30 p values and confidence intervals provided in study but not reported here due to lack of validity. Resilience scores Non Significant change Compassion Scores Non significant change.	Peer connection was considered to be a part of mindfulness. The theoretical underpinnings of this was not developed or explained.	teaching and practice. Which suggests that conceptually and theoretically according to the authors that peer-connection was conflated with a mindfulness process. Conflicting and unclear with emerging theory **EXTERNAL VALIDITY LOW** USA Primary Care Clinicians consisted of Primary care medical Dr or a Dr of Osteopathy, Nurse practitioner and Physician assistant Working in Internal medicine, Family Medicine or Paediatrics. Self-selected participants
Jensen (2008)**(56)**	Qualitative In-depth interviews n=17 Burnout and Resilience Self awareness not specifically empathy Professional (peer) support	Explore the Concept of Resilience within targeted family physicians. Phenomenon: Defined resilience as absence of burnout. Purposive sample based on reputation (observed?) resilience 30-60 minute interviews. Themes examined at 5 interviews, at 10 interviews and at 17 interviews. Explored 4 Questions	Relevance; Definition of Resilience similar to thesis. Successful adaptation to stress Resistance to Burnout. Self-awareness but not empathy described Context: Family physicians similar to Australian GPs 59%women	Main themes supporting resilience practice were found by saturation of interview data. Attitudes and Perspectives (Personal disposition and personal belief) Balance and Prioritisation (sense of control, time for patient care and for personal life) Practice Management (workplace lens well structured work routines and good supportive professional networks)	Peer Connection dimensions Mentioned within two of the main themes as being a factor in Resilience.	Canadian family physicians have a similar scope of practice to Australian GPs. Descriptive study suggests interesting relationships between peer connection of various types, support education, mentoring and practice relations and Resilience. Prosocial nature inferred.

		About medicine as a career. Physician avoidance of stress and burnout Clinical errors and management of. Keeping up with medicine. Plus Probes	35% salaried academics 41% fee for service. **Internal Validity Moderate** Exploration of Resilience for behavioural outcomes. Empathy not directly addressed Suggested that for purposes of concept development purposive sampling was advantages to explore the phenomenon. Inteviews achieved saturation of themes.	Supportive Relations (regular and strong peer interaction with cultivation of personal relations)		Self awareness may be a factor in empathy although empathy not at all described **External Validity Low** Moderate increased by similar work context Decreased by qualitative nature and descriptive study. Useful for conceptual development and subsequent intervention trials.
Krasner (2009)**(9)**	Quantitative before and after study n=70 Empathy Burnout and Resilience all included in text. Peer connection an unexpected finding.	Impact of a Mindfulness Program on Physician Well Being Intervention: 52 hours of communication and mindfulness training including; X8 weekly 2.5 hour intensive sessions X1 seven hour silent retreat X10 monthly 2.5 hour sessions Appreciative Interviews with Peers	Relevance Addressed all themes but USA primary care physicians. Hence context of work may have differences to Australia.	Six outcome measures MBI Mindfulness Empathy (JSPE) Psychosocial-orientation Personality Mood POMS) Program showed improvements Scales; Burnout in all scales Empathy Psychosocial beliefs Improved mood And Mindfulness	Peer Connection was used throughout this course with group sessions, debriefing, appreciative Inquiry sessions and establishing a trusting safe environment to discuss clinical experiences however 'peer connection' was not addressed in the	This study contributes to theory as identifying the confounding possibility of peer connection or its co-contribution to improvements in physician wellbeing established here. Identifies Resilience as a multi-construct adaptation which may occur in unique individuals according to variables of

		Outcomes measured five times at; 37 days pre program, 0, 2, 12, and 15 months. Duration of program was 12 months	**Internal Validity Moderate-High** Use of validated scales Adequately powered Non randomised Self selected Cohort (less rural and more family physicians) Before and After study useful in policy for complex interventions Non control Confounder possible was the spending of time with peers and peer interaction. Single setting Self report scales	Changes that did not persist; At Measurement 5 Empathy Mood (tension and confusion measures) Personality Factors Extraversion Agreeableness Openness Changes that improved over time Burnout; (Depersonalisation scale) Mood; (depression and fatigue scales) Personality Factors (Conscientiousness Emotional stability)	study concept or design. At the data collection point however note was made of this confounding variable Characterisation or concept development did not occur Noted only as a confounder	practice, personality or mood states. Did not address larger themes of organisational or political context per se but suggested that improvements were possible in selected individuals via similar programs without large changes from organisations. Practical suggestions for future interventional research More development of peer connection conceptual development and effects needed. **External Validity Moderate** USA setting Primary care clinician =family medicine, general internal medicine, paediatrics or combined internal medicine and paediatrics
Nielsen (2009)**(125)**	Qualitative Case Study One Supervision group Participants =7 Burnout Resilience (as prevention of burnout)	Phenomenon of Intent Prevention of burnout via peer group supervision. Group Meetings with one experienced psychoanalytic supervisor and seven GP members	Relevance and Context Danish GPs have a similar working context to Australian GPs.	Key results 1.Participants (all) benefitted from supervision group. Tiresome consults were now challenging Ability to remain GPs no longer felt like leaving the profession.	Dimensions of Peer Connection Focussed on a broad definition of compassion fatigue being cumulative small doses of	Contributing or conflicting with theory Indepth contextual view of particularly motivated GPs emotional lives and

	Therapeutic Supervision (as Peer connection) Burdens of empathic listening.	Meeting once a month 10 X per year for 3 hours each session. All aspects of professional life but most often problematic Doctor-Patient relationships. DATA: Participant Observation 3 sessions over 5 months (Data set #1) 5 members interviewed post each session.(Data set#2) Re interviewed after 2 weeks.(Data set#3) Supervisor interviewed after first session and after the last session of participant observation. (data set #4) End of all observation entire group was interviewed (Data set#5)	Incentive payments are provided to run the small group process. Relevance: One self-selected small group. Thick phenomenological description. Focussed and formalised process on psychotherapy may not be relevant to informal CME learning groups although author addressed this as a possibility. **Internal Validity** Moderate-High Through triangulation and partipant observation provided multiple data sets to address the phenomenon.	2.Attitude changed form problem solving to being present. Disease model of healing became person centred. 3. Organisational change Recalibrated the structure of work to minimise stress and create sturctures so can recover from workload and not become overwhelmed. 4.Compassion Fatigue. Expressions of this and the term used broadly and nonspecifically encompassing emotional exhaustion.	focussed empathic listening to patients which is contextual to GPs. Group process alleviated this burden and caused self-reported changes in practice structure. Prevented at least 2 GPs in this group from giving up practice so suggested that peer connectivity as group supportive process is a powerful process and needs more research.	burden of "empathic listening" Suggestive that may be suitable for some practitioners only- those who were willing to participate in reflective processes. Suggested may occur in other group processes such as CME may also provide benefit. Suggests that more research is needed of a longitudinal nature. **External Validity** Context applicable to Australian GPs Findings not generalizable but support phenomenological development of theme.
Winefield (1998)**(58)**	Study Characteristics 1998 Pre-Post design Quantitative n=20 Burnout (MBI) Group Sessions (peer connection)	Intervention/Phenomenon Stress reduction intervention designed for women GPs Relevant stressors Work-family conflict Sexism Career interruptions Pre measures at baseline pre seminar 1. Post measures 4 weeks after cessation No control group.	Relevance and Context: Women GPs in Australia Relevance less due to lack of focus on resilience and empathy although MBI utilised. **Internal Validity** Low	Key Results Pre Intervention Results: Social supports= often inadequate GHQ = high stress Job satisfaction =High MBI= Emotional exhaustion=high Depersonalisation=moderate Personal accomplishment/efficacy=High Post Intervention	Dimension of Peer Connection Group process Facilitated Specifically tailored to women discussing issues identified in research as relevant stressors. Particular subgroups of	Conflicting or contributing to theory Using a Gendered lens some insights regarding the double isolation that part time women may have from work, with extra family responsibilities plus all GPs isolated from being able to influence the political organisation within which they work due

				GHQ improved especially in the higher scorers (regression to mean?) Improvers rated discussion more highly than non-improvers and worked less hours. MBI Emotional Exhaustion improved. Depersonalisation and Personal Accomplishment dimensions no change described as non significant but n=20	women found group discussion particularly valuable.	to scattered nature of small private practices. Process measures of quantity of work may not be addressing quality of work and may isolate women. **External Validity** Low Hard to say if changes are due to intervention without a control group No generalizable based on numbers Not generalizable to men. Nevertheless interesting exploratory views utilising a gendered lens
		Measures Demographics/Social supports Work related Well being (3 item) Psychological distress General health Questionnaire – GHQ (12 item) Job satisfaction (modified Warr et al) MBI **Intervention** Evening Seminars 3 hours each Fortnightly Total of 3 meetings Pre readings and Topics Week 1 Work pressure Personal Expectations Week 2 Satisfaction with work Social support and help Changing expectations Relaxation exercise Week 3. Practice Management tips Enhancing social supports Writing joint letter to health authorities Facilitators; GP Psychologist Researcher Post Graduate- Educator	n=20 using quantitative measures. Suggests a pilot study testing specific intervention			

The COREQ statement was applied to this research project.

Table A2.1. Consolidated Criteria for Reporting Qualitative Studies (COREQ): 32-item checklist.

Domain 1: Research team and reflexivity Personal Characteristics			
Item Guide	Descriptor	Study Evaluation and response	
1. Interviewer/facilitator	Which author/s conducted the interview or focus group?	KP	Single author but Phd 3 co-raters and ongoing supervisor review
2. Credentials	What were the researcher's credentials? E.g. PhD, MD	PhD candidate MBBS, FRACGP	Supervisors experienced academic GPs and an academic methodologist
3. Occupation	What was their occupation at the time of the study?	GP	
4. Gender	Was the researcher male or female?	F	
5. Experience and training	What experience or training did the researcher have?	PhD	Monash University
Relationship with Participants			
6. Relationship established	Was a relationship established prior to study commencement?	In most cases No	GP who is active on social media and within RACGP; other than professional awareness and limited professional relationships
7. Participant knowledge of the interviewer	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	As much as they required during informal contact and arranging of interviews and procedures.	Explanatory statement only and any informal questions during the research
8. Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	See Reflexive comments throughout the project.	
Domain 2: study design Theoretical framework			
9. Methodological orientation and Theory	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	Constructivist Rogerian (humanist) and pragmatic influences of theory informing Interpretive Thematic analysis	Described as anarchic but within the paradigm of responsive to research design.
Participant selection			
10. Sampling	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Sample 1.Purposive and Sample 2. Snowball	
11. Method of approach	How were participants approached? e.g. face-to-	Face to face Video link Telephone	

		face, telephone, mail, email		
12. Sample size	How many participants were in the study?	29	21 Confirming sample 8 Disconfirming sample
13. Non-participation	How many people refused to participate or dropped out? Reasons?	X1 known who was lost to further prompts after agreement. Rural GP	See details of non responders
Setting			
14. Setting of data collection	Where was the data collected? e.g. home, clinic, workplace	Varied. By mutual agreement.	Participant GP home Participant GP clinic Monash office of researcher Conference facilities RACGP HQ Golf course
15. Presence of non-participants	Was anyone else present besides the participants and researchers?	No.	All interviews were in a private and quiet space undisturbed in each of the above locations
16. Description of sample	What are the important characteristics of the sample? e.g. demographic data, date	See table in findings. Working Aust GPs > 5 years of independent practice	Two samples 21 in confirming 8 in disconfirming
Data collection			
17. Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Yes And Yes	Questions were provided in Appendix xyx Pilot tested on x2 participant GPs known to researcher
18. Repeat interviews	Were repeat interviews carried out? If yes, how many?	No but a second disconfirming sample	Repeat question on definition within the question schedule
19. Audio/visual recording	Did the research use audio or visual recording to collect the data?	Audio recording	
20. Field notes	Were field notes made during and/or after the interview or focus group?	Yes	Occurred after the interview.
21. Duration	What was the duration of the interviews or focus group?	Group A. 39-123 minutes Group B. 35-105 minutes	
22. Data saturation	Was data saturation discussed?	YES.	no new insights were apparent
23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	No	other than free comments invited at the end of the interview.
Domain 3: analysis and findings			
Data analysis			
24. Number of data coders	How many data coders coded the data?	X1 PhD Candidate X3 co-rater	
25. Description of the coding tree	Did authors provide a description of the coding tree?	A coding tree developed and not a codebook consistent with reflexive thematic analysis procedures	Codebook not applicable but coding tree was discussed.
26. Derivation of themes	Were themes identified in advance or derived from the data?	Derived from the data by interpretation. Sub analysis of themes using Rogerian theory as a guide.	

27. Software	What software, if applicable, was used to manage the data?	NVivo 12	
28. Participant checking	Did participants provide feedback on the findings?	Non-participant GPs That is disinterested peers comments at conferences and research pitch events.	
Reporting			
29. Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g. participant number	YES	Illustrated themes Quotations were identified by line and participant
30. Data and findings consistent	Was there consistency between the data presented and the findings?	Absolutely!!	
31. Clarity of major themes	Were major themes clearly presented in the findings?	YES	
32. Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	YES participants Group A #4, 19 and 21 Group B # all of them!	

Table A3.1. Purposive recruitment confirming group.

Inclusion	Exclusion
GPs post training	Practice that focuses exclusively on a speciality or sub speciality area
Non supervised GPs	GPs enrolled in a vocational training Program
Established Australian Practice via date of independent practice for five years	GPs who currently require supervision
Broad based Family Care	GPs who do not have full independent registration
Practice Type is any size Eg: in terms of solo, or group practice	GPs who are not in active practice.
Gender/ Age irrelevant	
In active patient care within the last 12 months.	
AHPRA registered	
Unrestricted practice	
Current Use of Small group learning formats for CPD including journal clubs, large group practices and RACGP endorsed formats. (continuing professional development)	
Current Use of professional reflection group e.g. Balint	
Current Use of Social Media for professional education purposes e.g. #FreeOpenAccessMedicalEducation (FOAMed) or virtual communities Twitter, Facebook, Google Groups.	
Conference based GP participants, e.g.: RDAQ, WIGP, RACGP events.	

4.1 Invitation to research for participants

Volunteer GPs Required for GP Well Being and Workplace Study

We are exploring the **role of peer–peer connections** in maintaining a healthy GP and a healthy workplace.

You may be eligible for this study if you:

Are an AHPRA registered General Medical Practitioner

Are currently working any amount of active clinical general practice of 5 years or more. Interruptions to this practice are not a problem.

Are post fellowship of ACCRM or RACGP

Non VR but in active clinical general practice of more than 5 years.

Are not involved in a current training program or mandated (involuntary) peer support program.

If you are currently <u>voluntarily involved</u> in GP focussed peer groups or GP social media or any formal or informal group learning environment.

If you choose to take part you will be asked to have a confidential in depth one on one interview with GP, Dr Karen Price. This interview will be audio recorded for research purposes. It is likely the interview will last fifty to sixty minutes. This can occur at a place and time of our mutual choosing. I wish this talk to be as comfortable as possible for you and at your convenience. I will travel to you.

There is no reimbursement for this activity but you will be contributing to research towards a safer working environment for GPs and to GP led General Practice Research. I do very much appreciate your time and contribution to our profession.

Should you wish to find out more about this study, please contact:

E : karen.price@monash.edu

Dr Karen Price

GP and PhD candidate

Monash University

School of Primary Healthcare

Building 1
270 Ferntree Gully Road
Notting Hill VIC 3168

4.2 RESEARCH EXPLANATORY STATEMENT

Ethics Approval MUHREC: CF15/1761-2015000895
Participant: AHPRA Registered General Practitioner

PhD Research Project: The Role of Peer Connection in General Practice

You are invited to take part in this study by

> **Dr Karen Price** MBBS, FRACGP
> School of Primary Healthcare
> Department of General Practice
> Building 3
> 270 Ferntree Gully Road,
> Notting Hill. Vic 3168
> Phone: 0414 959 440
> email: karen.price@monash.edu

Please read this Explanatory Statement in full before deciding whether or not to participate in this research. If you would like further information regarding any aspect of this project, you are encouraged to contact the researcher listed above.

What does the research involve?

This is a two phase study and consists of two parts; first qualitative interview and the second part is a quantified anonymous survey. Participants will be invited to Phase One or Phase two **but not to both.**

The aim is broadly to explore and refine the concept of peer connection in General Practitioners and the role it might play in GP and workplace well being

Phase one: in depth interviews

I will be asking an hour of your time to perform a face to face interview at the time and place of your choosing to understand better your work practices and activities within the vocation of General Practice. The interview style is rather free flowing and is conducted along the lines of a conversation. You are able to refuse and withdraw at any time without any consequence. These questions will explore how you interact with your peers in the workplace of General Practice. All interviews are conducted by GP Dr Karen Price and will be tape recorded for later analysis with some hand written notes.

Phase Two: anonymous survey questionairre

This will consist of asking you to complete an online or hard copy series of tick box questions. It is estimated that these will take between 30-40 minutes of your time. There are no long answers required. Your responses are confidential and anonymous. You will not be able to be identified. The results will be marked confidential and returned to myself at the contact details listed above.

At all times your data is confidential and will be de-identified for the purposes of my thesis. All data will be handled in accordance with the Monash University Research Ethics Committee guidelines.
At any point you are welcome to contact me or talk to me regarding any issues or queries you may have regarding this project.

Why were you chosen for this research?

My thesis is exploring the workplace of General Practitioners and particularly the peer connections that may occur. The purpose of this is to provide an improved understanding of the networks and practices of GPs

who have functioned effectively over a period of time. In order to obtain a suitable sample I have utilised the distribution networks of the RACGP, the AMA and Social Media Networks and publishing companies as well as convenience sampling from my colleagues and peers.

I would like to thank you for responding to the invitation as I hope that this research will contribute to the ongoing healthy workplace discussions that surround General Practice and support Doctors wellbeing.

Source of funding

At this stage I am self-funded and working part time on my thesis and in clinical practice. I will be applying for funding to assist with the data analysis and travel requirement costs of the project.

Consenting to participate in the project and withdrawing from the research

Steps involved

1. Read and understand this Explanatory statement. Seek clarification if necessary.
2. Please sign and return the Consent form in a self-addressed reply paid envelope or via electronic signature to the email address supplied.
3. You are able to withdraw consent and cease participation at any point within the study. There is no consequence to you or your workplace future should you decide to withdraw.
4. The data once collected will become a de-identified data set and once analysis is finished it will be difficult to withdraw your particular responses at a later date. At all times you are welcome to contact the Researcher for clarification and understanding of data management or withdrawal.
5. Should you wish to not participate no further contact will need to be made and as previously stated there are no ongoing consequences for you or your workplace. If you are interested in discussing this research you are of course welcome to contact me Dr Karen Price on Email: karen.price@monash.edu or Mobile: 0414 959 440

Possible benefits and risks to participants

I envisage my contribution to the research will consist of understanding better design of workplace systems for General Practitioners. The benefit to you is to contribute to the better design of GP workplaces and to ongoing GP led research and knowledge repositories. It is not likely that you will come to harm in the performance of an interview or questionnaire. There may be some potential transient discomfort as your reflect on your current state of burnout or resilience and the reasons for this. You are welcome to discuss these with me further or request a pause or to cease further participation. It is not thought that this discomfort on reflection is likely to be severe, prolonged or particularly dangerous to you as a mature General Practitioner, however you will be supported at all times and your comfort is of prime concern to me.

My two supervisors are Associate Professor Lyn Clearihan and Associate Professor Jan Coles both General Practitioners and Monash University Academics. Your data is protected In accordance with the Ethics protocol. All protocols for the management of research data will be carefully followed.

Services on offer if adversely affected

1. See your **GP**.

2. **AMA** ANONYMOUS PEER SUPPORT** TEL: 1300 853 338.
      **Note you do not need to be an AMA member to access this line.

3. **RACGP GP support.** Free call: 1800 331 626 Email: membership@racgp.org.au

4. **Victorian Doctors Health Program** Tel (03) 9495 6011 Email: vdhp@vdhp.org.au

5. **Lifeline** Anonymous 13 11 14

Payment

At this stage I can offer you very little but personal satisfaction for participating in General Practice research for completion of the interview or questionnaire. Once the thesis is completed I will be happy to supply a copy. I am always available to answer your questions regarding this area of research.

Confidentiality

Data collected will be under numbered alpha numeric codes so that no names will be attached to interview transcripts. Questionnaire data is anonymous and untraceable. The Researcher has consulted with the Data Management Coordinator of Monash University and is following recommendations for confidentiality of all data. You may request The Monash University Research Data Planning checklist that I have prepared for this research should you wish to clarify further and you are always welcome to clarify with me personally.

Once published, the data will be available in a final published thesis and the data presented in a de-identified format. At every stage as is consistent with a thesis, the findings may be presented at Academic seminars at Monash University or at Health Conferences within the General Practice and Workplace domains. Your actual responses will be de-identified by using an alpha numeric code only and it will be this code or related pseudonym that is reported if required within the thesis or published documents.

Storage of data

The data will be stored in the secure environment of the Monash University technology environment. This environment is under Authcate password, encrypted and backed up in the appropriate Faculty S drive. All data including paper references are managed according to the MUHREC statements for Research Data management. The Authcate password is only accessible by the Researcher.

According to research guidelines and the Public Records Act 1973, retention of data will be for a minimum of seven years after thesis publication. It is anticipated that some data may be stored for longer in anticipation of future post-doctoral work and so it can be made available in de-identified format to other academic researchers and in accordance with ethical guidelines. These applications must always be made through to the Researcher and it is ultimately my responsibility for preserving the data integrity and confidentiality.
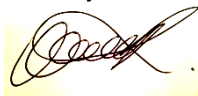
Results

My thesis is likely to conclude at the end of 2020 if there are no revisions. You will be welcome to access the findings and publication at that time and of course you are always able to discuss with me at any time should you have any queries related to this research.

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 (MUHREC):Executive Officer
Monash University Human Research Ethics Committee (MUHREC)
Room 111, Building 3e
Research Office
Monash University VIC 3800 Tel: +61 3 9905 2052
Email:muhrec@monash.edu Fax: +61 3 9905 3831

Thank you,

Dr Karen Price
MBBS, FRACGP   333

4.3 Procedures for Snowball recruitment of disconfirming sample

1. Phone call
2. Explanatory statement if agreed and consent form as detailed in methods

4.4 Consent Form Participant: AHPRA Registered General Practitioner

Project: The role of peer connection in General Practice.

PhD Candidate and Researcher: Dr Karen Price

School of Primary Healthcare
Department of General Practice
Building 1.
270 Ferntree Gully Road
Notting Hill VIC 3168
Telephone
Phone: 0414 959 440
email: karen.price@monash.edu

I have been asked to take part in the Monash University research project specified above. I have read and understood the Explanatory Statement and I hereby consent to participate in this project.

I consent to the following:	Yes	No
In-depth interview as explained in the Explanatory Statement	☐	☐
Audio-taping during the interview process.	☐	☐
The data that I provide may be used by Dr Karen Price in future research projects in de-identified formats as described in the Explanatory Statement.	☐	☐

Name of Participant

Participant Signature

DATE

APPENDIX FIVE: PARTICIPANT DEMOGRAPHICS

5.1 Full demographics of purposive recruitment confirming sample

Table A5.1. Purposive recruitment sample.

Interview number and date of interview 2016	Participant Code And pseudonym	Place of Grad Redacted	Year of Grad	Nominated Gender	Years post General Practice Training	Age at the time of interview	GP Location	Children Y/N Redacted	R'Ship S/M/D/W Redacted	Usual sessions worked Per wk One Session = 3-4 hours
1 20 Jul	AA MV	■	1986	F	26 (6 in research)	54	Inner metro Vic	■	■	5
2 20 Jul	AACG	■	1986	M	30	55	Inner metro Vic	■	■	7
3 02 Aug	AAWM	■	2004	M	7	40	Inner metro Vic	■	■	7
4 03 Aug	AABJ	■	1982	F	26	57	Inner metro Vic	■	■	7
5 08 Aug	AAOK	■	2005	F	6	35	Inner metro Vic	■	■	8
6 12 Aug	AAYU	■	1978	M	35	62	Rural vic	■	■	8+
7 15 Aug	AAH2	■	1986	F	26	52	Inner metro Vic	■	■	5
8. 17 Aug	AAVX	■	2002	F	11	38	Outer metro Vic	■	■	6
9. 19 Aug	AAXW	■	1994	F	17	47	Outer metro Vic	■	■	6
10 19 Aug	AAFM	■	1982	M	29	58	Outer metro VIC	■	■	9
11. 28 Aug	AAC5	■	2006	F	8	34	Regional NSW	■	■	2
12. 29 Aug.	AACR Ineligibility at interview		2001	F	5 But only 2 since fellowship ☹	42	Inner metro NSW			7
13. 31 Aug	AAWA	■	2002	F	11	38	Inner metro NSW	■	■	6
14. Sept 13, 2016	AAGK Ineligibility at interview		2009	F	3 years!!! ☹	31	Regional-rural QLD			8+
15. Sept 16, 2016	AAOO	■	2003	F	7 Y	39	QLD outer metro	■	■	6
16. Sept 16, 2016	AA6X	■	2001	F	11	39	QLD inner metro	■	■	7
17. Sept 30 2016	AAO8	■	1999	F	14	39	Outer metro Perth	■	■	6
18. 30/9/2016	AARL	■	1985	M	25	54	Outer metro QLD	■	■	7
19. 01/10/2016	AACC	■	1976	M	37	63	Inner metro SA	■	■	6

	Code name and psuedo	Place of grad Redacted	Year of grad	Gender	Years in GP	Age years	GP region	Kids Redacted	M/D/S/W Redacted	Session per week
20. 01/10/2016	AAS7	■	2004	M	9	39	Regional QLD	■	■	11
21. 07/10/2016	AAVA	■	1986	M	24	54	Regional VIC	■	■	6 [4 (+2 Hosp Obs)]
22. 18/11/2016	AAD2	■	1989	F	27	51	Outer Metro VIC	■	■	4
23. 19/11/2016	AAE6	■	2002	M	10	37	Remote	■	■	10

Full demographics of snowball recruitment disconfirming participants

Table A5.2. Snowball recruitment sample.

	Code name and psuedo	Place of grad Redacted	Year of grad	Gender	Years in GP	Age years	GP region	Kids Redacted	M/D/S/W Redacted	Session per week
1. 26/072018	BBJE	■	2004	F	10	41	Inner metropolitan	■	■	6
2. 30/07/2018	BBRZ	■	2001	F	12	41	Outer metro	■	■	5
3. 23/08/2018	BBGB	■	1992	F	14	51	Outer metro	■	■	5
4. 05/09/2018	BBUF	■	1984	M	33	59	Inner metro	■	■	9.5
5. 07/09/2018	BBSB	■	1982	M	31	61	Inner metro	■	■	12
6. 12/09/2018	BBXN	■	1980	F	34	60	Inner metro	■	■	8
7. 24/10/2018	BBAE	■	1984	M	30	61	Inner metro	■	■	10
8. 09/11/2018	BBGQ	■	1977	M	40	65	Outer metro	■	■	10

Appendix Six Interview Guide

1.   Describe your life in general practice? (what's it like?)

(a)   What is your practice like (physical space, number of practitioners)
(b)   Can you describe your interactions with peer colleagues in the local and larger community in GP land?

2.   a) So we are going to talk about peer connections now. What do you think that means??

b) Tell me about any particular connections you have with your GP medical colleagues? Are there different types of connection?

A.   Probes:
a.   When?
b.   Where?
c.   Why? Describe the VALUE?
d.   By choice or circumstances?
e.   Enjoyable? Tell me about the IMPACT?
f.   Wanting more or less ie The SATISFACTION with the amount..

3.   Does the context of general practice provide opportunities to interact and connect with colleagues?

a.   Is there a need to connect with colleagues?
b.   What is the need do you think?
c.   What does connecting with peers mean to you??
d.   Are there different levels of GP peer connection?

4.   Do you or your colleagues ever share workday experiences or encounters??

a.   Probes How and where does that happen?
b.   Probes Who would do that? (Does anyone do that)
c.   Probes: Is this a problem or a benefit?

5.   Can you give me an example of assistance that you might have provided for a colleague or they for you regarding patient encounters?

a.   Probes Has this changed the way you or your colleague managed (patient encounter or self)
b.   Probes What would you say are the most common types of peer interaction regarding patients? (skills, complaints, difficulties)
c.   Probes What is your most memorable or valuable peer interaction regarding patients?
d.

6.   Do you ever specifically seek out a GP medical colleague to talk with?

a.   Probes How do you do that and Who are they
b.   Probes What is it about this peer interaction that is unique?***
c.   Probes Are there any barriers or enablers to this interaction?
d.   Probes Is there any other reason why you seek them out particularly?

7.   Is there a certain quality of GP peer interactions that makes a difference to you?

a.   How do you see the role of peer interaction and are there different types?
b.   Where might these happen?
c.   How satisfied are you with the deeper aspects of being able to connect with peers?

8. Do you attract a certain type of patient?

a. Probe Why do you think that is?
b. Probe Do you prefer a certain type of patient?
c. Probe Why?

9. Do you have any advice about staying resilient within general practice?

a. Probe: Would you describe the role of peer connection fitting into this?
e.g. To your personal style of general practice?
e.g. And to the wider profession?

10. In your opinion… what does a healthy general practice workspace look like?

a. Probe: How does that help you do your work?
b. Probe: How do you create that?

11. What helps you stay connected and engaged?

a. with patients? (patient centred)
b. with your workplace?
c. with education environments?
d. with your overall career?

12. How would you describe your level of empathy in general practice?

a. Is there anything that helps or hinders your empathy?
b. Do you think empathy is important in practice
c. How satisfied are you with empathy in GPs?
d. Does peer connection help with maintaining your empathy? HOW ?WHY?

13. How would you describe your level of burnout in general practice?

a. Is there anything that helps or worsens feelings of burnout?
b. How satisfied are you with this?
c. Does peer connection help with burnout ? HOW? WHY?

14. How would you define the concept of peer connection now?

15. Any other comments or reflections you would like to make?

FREE CODES	SECOND LEVEL CODE	EXAMPLE

Benchmarking
    Distress   (*eventually Heart-lines*)
    Values
Deeper peer learning
    Case based learning
    Clinical learning
    Psycho-social knowledge
    Social and emotional learning (*eventually Heart-lines*)
    The debrief
    The witness (understanding)
    Vocational learning- education
Everyday GP Peer learning
    Advocacy and political domains
    Business Skills
    Consulting Skills
    Just in Time learning
Informal
    Curriculum

    Networks
Non GP Relationships
    Allied staff as peers
    Medical marriages or
    family at home
    Relationships others
Peer Connection
    Desire for
    Need for   (*eventually Heart-lines*)
    Value of
Peer Relationship qualities
    Peer validation   (*eventually Heart-lines*)
    Sharing and peer reciprocity
    Team work
    Trust
    Two minds observer stance
Peer Relationship Types
    As a resource
    As a safe place   (*eventually Heart-lines*)
    As colleagues
    As critics
    As family   (*eventually Heart-lines*)
    Diversity of
    Role model informal mentor
    As friends   (*eventually Heart-lines*)

SECOND LEVEL CODE box: **Peer Enablers of Peer connection in the workplace**

EXAMPLE box:

Meili Participant 16

I think it's reflective. I suppose it has its place in having a reflective role, so being a mirror for the way you're doing something in looking at am I doing it right or wrong or how can I be doing it differently. It's a support system, so for clinical knowledge, but I suppose also, as we've done, it's that emotional part as well, stuff that you can't get from people who aren't GPs sometimes. So it has a reflective role and probably actually those two things: the reflective role and the supportive role. Both of them probably have a clinical context in terms of knowledge and the way I practice, but also probably that deeper emotional kind of, "How am I actually going? Am I going okay? What am I doing to look after myself? What am I doing to make sure I don't burn out?" It does it in a supportive way in that I have people that I chat to -to recharge my emotional battery, to give me the knowledge that I need that I might not have.

Figure A7.1. Preliminary coding tree example

Boundaries
Empathy
  Perspective taking
  Warm empathic concern
Resilience
Self-awareness
Self-efficacy identified by self
Variation in practice as a human response
Variation in practitioner values
Well being
Winning at things positive events
Work enjoyment

Empathy
  Personal distress
Unconscious and subconscious
Vulnerability
  Burnout
  Care burden-role conflicts
  Cognitive fatigue from GP knowledge demands
  Empathy varies
  Patient safety errors
  Puzzling and perturbation
  Tiredness, lethargy and fatigue
  Uncertainty-anxiety
  Upsetting feeling

Barriers to peer connection
  Availability of peers
  Economic pressures
  Geography
  Leadership-practice owner
  Physical space
  Time

Changing practice issues
Confidentiality barrier to support
Financial issues
GP isolation
Lack of safe spaces to vent
Leaving practice or reducing hours
Moral hazards or hidden curriculums
Patient factors
  Clinical labour with complex patients
  Emotional labour with patients
Political barrier
System issues NOS

Practice characteristics
  Facilities
  Food and nurturance
  Geographic location
  Lunch or gathering room
  Size
  Staff and people

Second level codes: Personal enablement; Personal Barriers; Peer barriers; System Barriers; System Enablers

Third level codes: Intrapersonal; Interpersonal; System Factors

Theme: Navigation To The Resource Of GP Peer Relationships

Figure A7.2. Example of theme building

Figure A8.1 Mind-mapping whole data corpus (early work)

Figure A8.1. Thematic mind map

A8.2 Emotional coding of themes

Table A8.1. Career related emotions 1.

Emotional coding map of nodes October 2, 2017

Nodes that referenced Career Connection relationship with emotional tone		
Ideal (happy) Emotion	Neutral taken for granted ok necessary. As in "of course" Emotion	Negative Emotion
Peer Learning	Case study discussion	Moral Hazards
Self-efficacy (strongest feelings of +ve)	Instant knowledge	Financial issues
Benchmarking clinical cases	Patient safety	Leaving practice (Strongest)
Autonomy of practice	Practice facilities	System issues
Desirable System The Idealised System		Undesirable system Shadow System

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Table A8.2. Peer connection emotions.

Nodes that referenced Connection with Peer relationships with emotional tone		
Good TEAMS	**Of course accepted**	**The OTHER shadow**
Peer validation	Peers as a resource as friends, or as critics (OK)	OTHER GUY
Teamwork	Allied health	Peer as critics (threat)
Trust	Friendships are different	GP peer safety
Peers as colleagues, family, diversity	(Informal nature is invisible or undeclared)	Gender issues
Other relationships in the team non GP		
Sharing		
Ideal Team and Peer to Peer relationship benefits The Idealised Peer		Shadow Peer

Table A8.3. Emotions related to identity.

Nodes that referenced connection & relationship to SELF		
Great	**Neutral**	**Bad**
Well being	Self awareness	Burnout
Winning at Medicine good stories	Benchmarking self	Uncertainty
Empathy but it varies	Self-efficacy as observed by self	Puzzling perturbation
	Autonomy	Care burdens
	Boundaries	Emotional labour
		Isolation
		Lack of safety
		Vulnerability
		Upset
		Tiredness
		Self-referenced patient errors Invisible
Ideal self		Shadow Self

Figure A8.2 Mind-mapping using theory

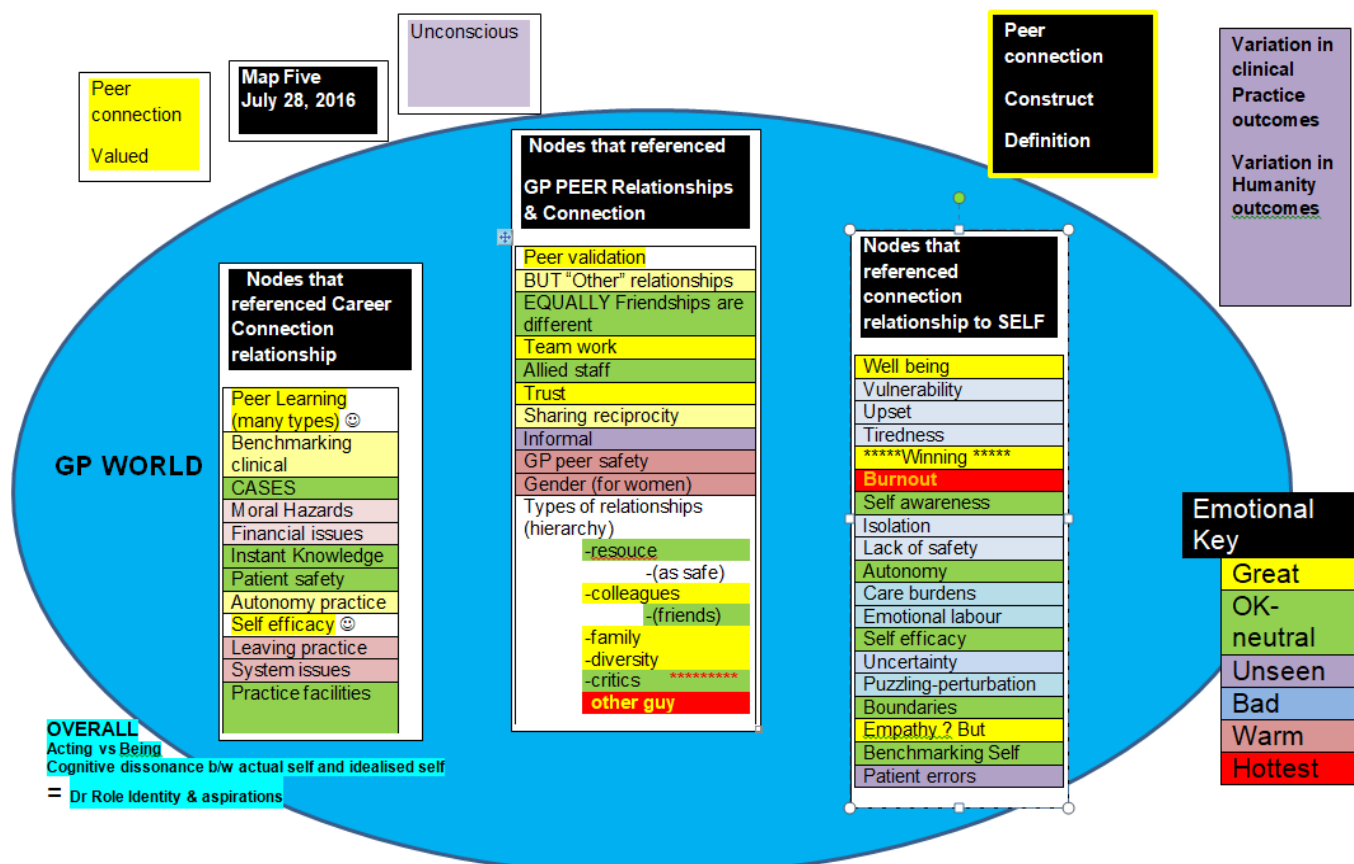Nodes in a Rogerian Relational Humanistic frame 28/07/2017 mind map of where nodes fit

Peer connection

Valued

Map Five
July 28, 2016

Unconscious

Peer connection

Construct

Definition

Variation in clinical Practice outcomes

Variation in Humanity outcomes

GP WORLD

Nodes that referenced Career Connection relationship

Peer Learning (many types) ☺
Benchmarking clinical
CASES
Moral Hazards
Financial issues
Instant Knowledge
Patient safety
Autonomy practice
Self efficacy ☺
Leaving practice
System issues
Practice facilities

OVERALL
Acting vs Being
Cognitive dissonance b/w actual self and idealised self
= Dr Role Identity & aspirations

Nodes that referenced
GP PEER Relationships & Connection

Peer validation
BUT "Other" relationships
EQUALLY Friendships are different
Team work
Allied staff
Trust
Sharing reciprocity
Informal
GP peer safety
Gender (for women)
Types of relationships (hierarchy)
  -resouce
    -(as safe)
  -colleagues
      -(friends)
  -family
  -diversity
  -critics *********
  other guy

Nodes that referenced connection relationship to SELF

Well being
Vulnerability
Upset
Tiredness
*****Winning *****
Burnout
Self awareness
Isolation
Lack of safety
Autonomy
Care burdens
Emotional labour
Self efficacy
Uncertainty
Puzzling-perturbation
Boundaries
Empathy ? But
Benchmarking Self
Patient errors

Emotional Key

Great
OK-neutral
Unseen
Bad
Warm
Hottest

Figure A8.2. Theory mind mapping

June 1st 2015:

1. Ethics approval was first granted on CF15/1761-2015. By Monash University Research Ethics Committee (MUREC).

Amendments:

June 9th 2016:

1. The title has changed from "What is the role of peer connection and its association with empathy and prevention of burnout?" To "The role of peer connection in general practice". Research design changed to qualitative first followed by smaller quantitative component.

May 22 2018:

1. Supervisor change to Professor Grant Russel and Dr Chris Barton.

2. Title (no longer needs ethics-amendments) Peer connection in general practice

3. Design update: fully qualitative design with no supplementary quantitative component and approval given for the new research design including application for a second disconfirming sample. Further refinement of the research questions.