

**A Model of Resilience, Burnout and
Intention to Quit among
General Practitioners**

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Statement of Authentication

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution

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Abbreviations

AGPN	Australian General Practice Network
AMPCo	Australasian Medical Publishing Company
AVE	Average Variance Extracted
CBI	Copenhagen Burnout Inventory
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CoR	Theory Conservation of Resources Theory
CMIN	Chi-square
CMIN/df	Chi-square Divided by the Degrees of Freedom
CMV	Common Method Variance
CPD	Continual Professional Development
D-A	Demands-Abilities Fit (P-E Fit Model)
DGP	Division of General Practice
E	Environment (P-E Fit Model)
EFA	Exploratory Factor Analysis
EI	Emotional Intelligence
E-RI Model	Effort-Rewards Imbalance Model
FIW	Family Interference with Work
GFI	Goodness of Fit Index
GoF	Goodness of Fit
GMS	General Model of Stress
GP	General Practitioner
GPCE	General Practitioner Conference and Exhibition
IJSM	Integrated Job Stress Model
ISR	Institute for Social Research (Model)
JD-C Model	Job-Demand Control Model
JD-CS Model	Job Demands-Control Support Model
JD-R Model	Job Demands-Resources Model
MBI	Maslach Burnout Inventory
MBI-ES	Maslach Burnout Inventory – Educators Survey
MBI-GS	Maslach Burnout Inventory – General Survey
ML	Medicare Local
MV	Marker variables

OLBI	Oldenburg Burnout Inventory
P	Person (P-E Fit Model)
P-E Fit Model	Person-Environment Fit model
PCEHR	Personally Controlled Electronic Health Record
PLS	Partial Least Squared
PUMA	Study on Burnout, Motivation and Job Satisfaction (Danish Acronym)
R ²	Coefficient of Determination
RACGP	Royal Australian College of General Practice
RMSEA	Root Mean Square Error of Approximation
RRMA	Rural, Remote and Metropolitan Area
RS	Resilience Scale
S-V	Supplies-Values Fit (P-E Fit Model)
SCM	Stress Cycle Model
SEM	Structural Equation Modelling
Standardised RMR	Standardized Root Mean Square Residual
STDEV	Standard Deviation
STERR	Standard Error
TLI	Tucker Lewis Index
TMS	Transient Mood States
URL	Uniform Resource Locator
UWS	University of Western Sydney
WFI	Work-family interference
WFC	Work-Family Conflict
WIF	Work Interference with Family

Abstract

Within Australia, General Practitioners (GPs) are the cornerstone of the healthcare system. As the first port of contact, GPs consult a large number of patients presenting with a range of both physical and psychological ailments, potentially resulting in excessive demands on the GP. The workload of a GP is exacerbated by the responsibilities of referral writing and other administrative duties. The increased demands of general practice can be the basis of work-family conflict (WFC), resulting in further stress for the GP. Due to the increasing prevalence of chronic health conditions, the ageing population, and recent government reforms, the role of a GP is becoming increasingly demanding, potentially leading to burnout, increased medical errors, decreases in GP-wellbeing, and reduced retention rates.

Resilience is hypothesised to reduce the influence that the demands of general practice can have on the GP, ultimately reducing burnout and intention to quit the profession. Yet there is currently no model to adequately measure this proposition. Extending the integrated job stress model, this study proposes a model to measure the influence of resilience on perceived job demands, burnout, and an intention to quit the profession, as reported by GPs.

This study used an exploratory mixed-methods research design to develop a holistic understanding of the situation. The sample includes GPs practicing in the metropolitan areas of New South Wales, Queensland, Victoria, and South Australia ($n=221$). Participants were invited to complete a survey comprised of established scales to measure the lessening influence that resilience has on GP burnout. Following this, a small number of participants were invited to participate in a semi-structured interview ($n=10$), to gain further insight into the lived experiences of GPs, thus complementing the survey results.

Following the structural equation modelling of the survey data, it was apparent that despite being associated with lower levels of WFC, resilience did not have the anticipated benefits in reducing GP burnout. A thematic analysis of the qualitative interview data suggests this might be due external factors that are not within the immediate control of GPs, such as the attitudes of difficult patients and the changing roles of a GP. This study suggests that the primary way to influence job demands and decrease burnout is via the provision of job resources. Job resources have been

shown to reduce job demands. Job demands are suggested to exacerbate burnout directly (by intensifying the demands of work) and indirectly (by generating work-family conflict). Therefore, through the increased provision of job resources, GPs are likely to: experience lower levels of burnout, experience improved wellbeing, deliver better patient care, and remain in their profession. Given the current challenges facing Australian GPs, it is important to improve the capacity of the primary care workforce. Through its theoretical contribution, this thesis demonstrates ways to bolster this capacity.

Chapter 1: Introduction

1.1 Introduction

General Practitioners (GPs) are exposed to a multitude of stressors, both internal and external to general practice, which combine to form significant levels of stress. Examples of such stressors include patient demands (Parslow et al., 2011), workload (Britt et al., 2011), Government health reforms (Department of Health and Ageing, 2012) and work-family conflict (WFC) (Ádám et al., 2008). Prolonged exposure to these and other stressors can result in burnout further diminishing GP wellbeing.

GP stress can reduce wellbeing, quality of patient care and increase the level of intention to quit the profession. GP stress erodes the physical and psychological wellbeing of GPs, potentially resulting in depression (BeyondBlue, 2013) and suicidal ideation (Lindeman et al., 1996). As GPs experience stress the potential for medical errors increases. These errors are detrimental to patient recovery and expose the GP to litigation (Nash et al., 2010). The level of intent for GPs to leave their profession is quite high (Hann et al., 2010, Kuusio et al., 2013). With limited fulfilment from their work to compensate for the demands they are exposed to, many GPs have chosen to leave the profession prematurely (Brett et al., 2009, Schofield and Beard, 2005). Due to the increased prevalence of chronic health conditions, the ageing population and the increased emphasis of primary health care, the demands placed on GPs will continue to rise (Australian Institute of Health and Welfare, 2013b, Department of Health and Ageing, 2012). These factors, combined with insufficient levels GP recruitment (Joyce et al., 2006, Arnold, 2010) and the ageing GP workforce (Heath Workforce Australia, 2012, Schofield and Beard, 2005), demonstrate a potential GP shortage.

This study investigated the influence that resilience might have on the impact of the stressors experienced by GPs both within and beyond general practice. Should the findings suggest that resilience minimises the impact of these demands, the findings could be used to inform future initiatives to maximise resilience among GPs. Doing so could highlight paths to improve GP wellbeing, the quality of patient care, and GP retention rates.

This chapter introduces the dissertation. It commences by describing the research context, Australian general practice, with further details on the GP role and some of

the challenges GPs face. The chapter then discusses the relationship between the potential impact of these challenges on burnout and an intention to quit the profession (Nash et al., 2010, Schofield and Beard, 2005, Brett et al., 2009, Rachootin, 2010, Britt et al., 2011). Following this, the scope of the study is detailed. More specifically, the study investigates the hypothesised relationships between resilience, burnout and intention to quit general practice. Should resilience be associated with low levels of burnout, initiatives can be developed to build GP resilience and decrease burnout.

1.2 Research Context

Within Australia, due to their fundamental position within the medical system (Britt et al., 2011), GPs consult patients with a wide range of conditions of varying severity. General practice is widely regarded as a stressful profession (Firth-Cozens and Moss, 1998, Dolatowski et al., 2007), with the main contributors being high patient-loads (Schattner and Coman, 1998), Government reforms (Eley et al., 2007) and limited work-life balance (Keeton et al., 2007). These factors have been exacerbated through ongoing nation-wide health reforms.

As part of the ongoing national health system reform, a shift from a hospital-centric health care system to a people-centred primary care system has taken place. To reduce hospital demand, increased emphasis has been placed on bolstering the primary care sector to accommodate their increased role in the wider healthcare system (Department of Health and Ageing, 2013). These changes have intensified the GP role in the management of chronic health conditions, mental health and other ailments once managed in a hospital setting.

1.2.1 The Role of an Australian General Practitioner

The role of a GP within the reformed Australian healthcare system is vital. The GP is the first contact point for most physical and mental ailments, prescribes a range of medications, and guides patients through the wider medical system for any necessary diagnostic or treatment avenues (Britt et al., 2011). As these demands combine, there is the potential for considerable stress to occur (Britt et al., 2009, Pirota et al., 2010).

GPs consult many patients with a variety of physical and psychological conditions (Parslow et al., 2011). Australian researchers Britt and colleagues (2011) investigated

the common cases seen in general practice. Over an average of 100 consultations, GPs consulted patients on 153 health problems, notably respiratory problems, skin problems, cardiovascular complaints, and musculoskeletal problems. On average, a GP encounters 59 different problems per 100 standard consultations (Britt et al., 2011). This variety of conditions GPs are required to consult is a major contributor to the demands of general practice (Nielsen and Tulinius, 2009). Furthermore, GPs are also susceptible to negative patient interactions potentially falling victim to patient aggression and violence (Forrest et al., 2010, Hills et al., 2013), adding further complexity to the role of a GP. Due to the numerous conditions GPs encounter, occasionally reaching a diagnosis is difficult.

When patient diagnosis is unclear, it may be necessary to undertake further diagnostic tests. Over the course of 100 consultations, GPs request an average of 45 pathology tests and ten imaging tests (Britt et al., 2011). This requires GPs to have knowledge of all diagnostic aids. The weight of this expectation felt by the GP, as well as the added workload of associated consultations to deliver results, can contribute to practice-related demands (Britt et al., 2011, Britt et al., 2009). In cases where GPs are unable to provide treatment, it is necessary to refer the patient to other medical professionals.

GPs are responsible for referring patients to secondary medical professionals. According to Britt and colleagues (2011) GPs typically refer nine percent of their patient-load to either specialists or allied health professionals, including physiotherapists, psychologists and podiatrists. Although the treatment is administered by another professional, the need for GPs to refer and follow-up patients to such services contributes to their workload.

When applicable, the primary method GPs use to provide treatment are medications, be they prescribed, supplied directly by the GP, or recommended over the counter purchases (Britt et al., 2011). Due to the multitude of health complaints, the variety of medications designed, and subsequently prescribed, to treat these complaints are vast. With the range of medications available, when combined with limited GP time, determining the correct prescription can prove taxing (Velo and Minuz, 2009).

Due to their position within primary care, patients often request GPs to substantiate their sick leave as well as their suitability for various government initiated schemes

(e.g. mobility parking scheme) (Australian Medical Association, 2011b, Roads and Maritime Services, 2012). Such tasks are time consuming and in some cases little training is provided to help GPs fulfil these responsibilities (Schattner and Coman, 1998, Britt et al., 2009). The added time pressure and lack of confidence to fulfil these responsibilities can intensify the working conditions of the GP (Joyce et al., 2011). These stressors have increased in recent years under the ongoing health reforms.

Ongoing reforms have seen increased emphasis placed on primary care (Department of Health and Ageing, 2013, Department of Health and Ageing, 2009), adding further responsibilities onto GPs. The role of the GP has been further complicated by the management of chronic health conditions, the introduction of the personally controlled electronic health record (PCEHR) (Australian Medical Association, 2012), and the erosion of doctor patient relationship (Bisset, 2008, Department of Health and Ageing, 2011a). The ongoing reforms, some of which were made with seemingly minimal GP input (Australian Medical Association, 2011a), have further intensified the GPs work environment.

When these responsibilities are combined, stress can occur within general practice. As the demands of general practice intensify, they require higher levels of personal investment from the GP (Montgomery et al., 2006a). This process leaves less time and energy to dedicate to their family responsibilities. This can generate WFC which can be stressful for the GP (Ádám et al., 2008, Chaoping et al., 2003).

1.2.2 Work-Family Conflict

Due to the nature of their work, GPs are extremely susceptible to WFC (Ádám et al., 2008, Montgomery et al., 2006a). According to Montgomery and colleagues, WFC occurs when the 'pressures from the work and family (life) roles are mutually incompatible, such that participation in one role makes it difficult to participate in the other' (2006b, p. 37). As practice-related demands intensify the GP has less time and resources to devote to the family domain. This competition for resources can result in WFC (Walker and Pirotta, 2007, Swanson et al., 1998), which can further contribute to GP stress (Walker and Pirotta, 2007).

WFC has a significant impact on the individual, inducing significant levels of stress and an intention to leave the profession (Boyar et al., 2003). Thanacoody and

colleagues (2009) found that the stress of WFC has a greater influence on the individual, than many workplace stressors due to the emotional attachment the individual has to their family and the implications of not fulfilling their expectations. Accordingly when GPs experience WFC, a rise in intention to quit is likely to occur (Boyar et al., 2003, Greenhaus et al., 2001). As the tension of WFC intensifies, individuals will seek avenues of potential relief, often resulting in individuals seeking to withdraw from their work environment. In cases where individuals seek to endure the tension, unless a resolution is imminent, the GP will become increasingly susceptible to burnout (Rout, 1996, Swanson et al., 1998).

1.2.3 Burnout

GPs are known to experience burnout, which is exacerbated by stress in from both the practice and family environments (Adzic et al., 2013, Kacenenbogen et al., 2011, Dagrada et al., 2011, Clarke, 2011). As defined by Ashill and colleagues (2009) burnout is the psychological state consequent to continued exposure to intense levels of work and family-related stress, typically categorised by emotional exhaustion, depersonalisation and reduced personal accomplishment (Maslach, 1982). GPs consult a variety of patients including ‘the acutely mentally ill, the traumatised, the dying, those with chronic pain or illness, the “heart sink” patient and the socially disadvantaged’ (Benson and Magraith, 2005, 497), all of which can have a psychological toll on the GP. When coupled with the other difficulties GPs face, as detailed in section 1.2.1, GPs can become susceptible to burnout. This in turn can diminish GP wellbeing, reduce the quality of patient care, and intensify intentions to leave the profession, all of which are discussed (see Chapter 2).

Given the stressful nature of general practice, GP wellbeing is often compromised. Cooper and colleagues (1989) conducted a study with English GPs concluding that work-related demands were positively related to anxiety, depression, and the risk of alcohol abuse. These factors were intensified by job demands, excessive patient expectations and administrative duties. Winefield and Anstey (1991) found similar results with their Australian-based study. Since these studies, the stressors identified have increased (Charles et al., 2004). It is therefore anticipated that the associated consequences of the demands have increased correspondingly. GP burnout can also effect the quality of patient care.

Physician burnout has been linked with lower quality of patient care. Linzer and colleagues (2009) studied the implications of burnout with American physicians, including a large cohort of family physicians (GP equivalent). Linzer and colleagues found a concerning relationship between burnout and quality of patient care (Linzer et al., 2009). Additionally 26.5% of the physicians reported limited consultation time. Given the limited consultation time, physicians were forced to work at an unsustainable pace heightening the risk of diagnostic and treatment errors. Similarly, Nash and colleagues (2010) found Australian GPs experience poor mental health largely due to burnout, which impaired the quality of patient care. Adverse events can compromise patient health and give cause for litigation (Rubin et al., 2003) – both of which can be stressful for the GP.

The demands of general practice have led some GPs to reconsider how they deliver primary care. Some GPs have reduced their practice hours or left the profession (Britt et al., 2011). According to Schofield and Beard (2005), the average Australian GP was born between 1965-1974, and works fewer hours than previous generations of GPs to prevent the demands of general practice from impacting their family life and personal wellbeing. Internationally, the levels of GPs' intention to quit the profession are quite alarming (Sibbald et al., 2003, Simoens et al., 2002, Scott et al., 2006). Within Australia, these levels become more significant when combined with the ageing GP workforce. According to Rachootin (2010), 46% of GPs within Australia are aged over 55 years, nearing the typical retirement age. Research suggests that approximately 35% of the GP workforce has considered early retirement primarily due to the pressure of the practice environment, burnout, and dissatisfaction with the medical system and their role within it (Rachootin, 2010, Brett et al., 2009). Based on these findings excessive work demands exacerbate emotional exhaustion, depersonalisation, and reduced personal accomplishment. Consequently, GPs may pursue avenues to manage the stress, like reducing their clinical hours or withdrawing from the profession completely. This is particularly problematic given the ageing GP workforce (Schofield and Beard, 2005).

GP burnout represents a significant issue and is largely generated by practice-related (Britt et al., 2011) and family-related (Chaoping et al., 2003, Ádám et al., 2008) demands. Burnout can compromise GP wellbeing (Schofield and Beard, 2005), reduce the quality of patient care (Linzer et al., 2009, Nash et al., 2010) and heighten

levels of an intention to quit the profession (Rachootin, 2010, Brett et al., 2009). It is proposed that resilience can decrease the significance of burnout and associated implications.

1.2.4 Resilience

This thesis proposes that the implications associated with GP stress can be minimised by resilience. Resilience is ‘the ability to bounce back from negative emotional experiences and by flexible adaption to the changing demands of stressful experiences’(Tugade and Frederickson, 2004, p. 320). It encompasses positive emotion, cognitive flexibility, spirituality, social support, and active coping styles (Southwick et al., 2005a). It is proposed that resilience can limit the impact of the demands GPs face, and therefore decrease GP stress levels and the associated consequences. However there is currently no model to test this. Resilience is addressed in more detail in Chapter 2.

1.3 Research Justification

Within the Australia and beyond, GPs are exposed to stressors (Firth-Cozens and Moss, 1998, Dolatowski et al., 2007, Britt et al., 2011) originating from both the work and home environment. Common practice related stressors include patient demands (Schattner and Coman, 1998), high levels of workload (Nielsen and Tulinius, 2009) and government bureaucracy (Eley et al., 2007). As the demands of practice-life increase, the GP is left with less resources to devote to out of work demands, thus forming the potential for work-family conflict (Keeton et al., 2007).

The stressors of general practice have been shown to negatively impact the mental and physical wellbeing of the GP (Winefield and Anstey, 1991), elicit burnout (Linzer et al., 2009), decrease the quality of patient care (Nash et al., 2010) and ultimately lead the GP to leave the profession (Schofield and Beard, 2005, Brett et al., 2009, Rachootin, 2010). This thesis argues that resilience can decrease GP burnout and an intention to quit the profession. There is currently no model to determine the relationship between resilience, burnout, and intention to quit the profession among Australian GPs.

1.4 Scope of the Study

The study presents a new theoretical model to determine the influence of resilience on the relationship between job demands, burnout and the intention to leave general practice. This is achieved by expanding the Integrated Job Stress Model (IJSM) (Akhtar and Lee, 2010) to include WFC, resilience and the intention to quit. Should resilience minimise GP burnout, corresponding benefits in GP wellbeing (Firth-Cozens, 2001), quality of patient care (Halbesleben and Rathert, 2008) and increased GP retention (Simoens et al., 2002, Sibbald et al., 2003) will result.

This study was conducted using a sequential mixed methods research design (Ivankova et al., 2006) to understand the complexities of the situation. The study uses quantitative data to establish relationships between the research constructs before using the qualitative data to add a depth of insight which is simply not attainable using purely quantitative measures.

1.5 Thesis Outline

The thesis consists of five chapters. Chapter two reviews relevant literature, detailing the significant developments in occupational stress and general practice research, which influenced the theoretical understanding of the study. The review demonstrates the importance of GP burnout and their intention to quit the profession. Accordingly the research hypotheses are proposed to understand the situation.

The third chapter describes and justifies the adopted methodology and the associated research methods. The chapter also provides details of participant recruitment and the processes to interpret the quantitative and qualitative data. The chapter concludes with a discussion of ethical considerations, as well as measures to manage them.

Chapter four presents the findings from the analyses of the quantitative and qualitative data. The results of the quantitative analysis were used to test the hypothesised path model presented in chapter two. Following this, the results of the thematic analysis of the semi-structured interviews are presented.

The final chapter presents a critique of the research findings and discusses their significance. The chapter then details the theoretical contribution and practical implications of the findings, with specific reference to how the findings can be used

to inform initiatives to increase GP wellbeing and retention. The chapter concludes with a research program for further investigation.

1.6 Conclusion

This chapter has provided an overview of the contents of the thesis. It began with detailed information on the research context, Australian general practice, and the role of the GP within the medical system. This description suggests that GPs are likely to experience burnout and as such leave their profession. Following this the scope and hypotheses of the study were articulated. The chapter then provided an overview of the methodology used to realise the aims of the current study and to test the hypotheses. The chapter concluded by providing an overview of the thesis. Chapter two provides a summary of the literature, illustrating the significance of the problem area and therefore proposing hypotheses to address these shortfalls. The third chapter details the methodology used for the current project including all forms and procedures of data collection. This chapter then progresses to detail the ethical considerations that came apparent throughout the study as well as providing details on how these concerns were addressed. The fourth chapter of the dissertation presents the quantitative and qualitative findings. The chapter begins with the examination of the path model proposed in chapter two. Following this the details of the thematic analysis undertaken on the qualitative data to add further depth to the knowledge generated through the quantitative analysis. The final chapter of the thesis discusses the results presented in chapter four with focus provided on the significance and implications of these findings upon GPs. Following which this chapter then progresses to reaffirm the theoretical and practical contributions of the study before highlighting potential research areas which may hold the secret to improving the levels of wellbeing and retention of GPs.

Chapter 2: Literature Review

2.1 Introduction

Chapter two provides a review of the occupational stress and general practice literature that shaped the theoretical understanding of this study. More specifically, the former includes Karasek's (1979) job demands-control (JD-C) model, the subsequent advancements of the job demands-control support (JD-CS) model (Johnson and Hall, 1988a), and the job demands-resources (JD-R) model (Demerouti et al., 2001c). It also discusses the alternative perspective represented by Hobfoll's (1985) conservation of resources (CoR) theory in its increased importance of protecting against loss, as well as the IJSM (Akhtar and Lee, 2010), which combines the JD-R model and CoR theory. A review of WFC literature suggests that WFC can elicit additional stressors as well as the enhancement of existing stressors. Following this, the literature on the theoretical development of burnout was reviewed revealing its adverse effects. By reviewing the concept of resilience, it is proposed that resilience is negatively associated with burnout.

A review of the general practice literature revealed that GPs are exposed to significant levels of stressors, potentially resulting in burnout. Among GPs burnout can reduce personal wellbeing (BeyondBlue, 2013), decrease the quality of patient care (Nash et al., 2010), and increase intention to quit (Scott et al., 2006). This chapter concludes by proposing a model that has the potential to understand the influence that resilience has on the relationship between job demands, WFC and burnout, and consequently intentions to quit general practice.

2.2 Definitions of Stress

Stress as a concept has been researched for centuries, with different meanings and understandings developed accordingly. The conceptualisation of stress dates back to the writings of Cannon (1914, 1920, 1932), who is perhaps best known for the concept of 'homeostasis'. This is the body's ability to maintain internal consistency (Cooper and Dewe, 2004, Cannon, 1935); if a threat is present, the body will automatically respond to avoid the threat or restore the damage imposed, thus helping the body to self-regulate.

Lazarus (1966) was concerned with the influence that individual perception had on the experience of stress. When exposed to similar situations, individuals experienced varying degrees of stress, which was explained by ‘individual differences in motivational and cognitive variables which intervened between the stressor and the reaction’ (Lazarus, 1993, p. 3). This understanding was the origin of the stimulus-organism-response model, arguing that cognitive mediation is at the centre of psychological stress (Cooper and Dewe, 2004).

Today, stress can refer to a cause, a consequence, or a process (Firth-Cozens and Payne, 1999). As a cause, stress refers to any negative demands that have a toll on an individual. In this study, stressor will be used to refer to this interpretation. As a process, stress refers to when the sequence of stressors that exceed the individual’s ability to cope with a situation (Firth-Cozens and Payne, 1999). As a consequence, stress refers to a mental state that arises when demands (or stressors) tax or exceed one’s ability to cope (Lazarus and Folkman, 1984). According to this perspective, an individual will experience stress when subject to environmental demands that either impact on or outstrip their ability to cope.

For the purposes of this study, stress is understood to arise through an imbalance between the stressor(s) and one’s capacity to cope. As such, stress is here defined as the ‘realization by individuals that they are unable to cope with the demands placed on them by their environment’ (Dua, 1996, p. 118).

2.3 Theories of Stress

Various theories have been developed to explain stress. Through tracing the evolution of stress models from McGrath’s stress cycle model (SCM) (1976), the person-environmental (P-E) fit model (French and Kahn, 1962), general model of stress (Beehr and Newman, 1978), the effort-rewards imbalance (E-RI) model (Siegrist, 1996), the JD-C model (Karasek, 1979), CoR Theory (Hobfoll, 1989), to the IJSM (Akhtar and Lee, 2010); the theoretical foundations for the proposed model to understand GP stress are evident.

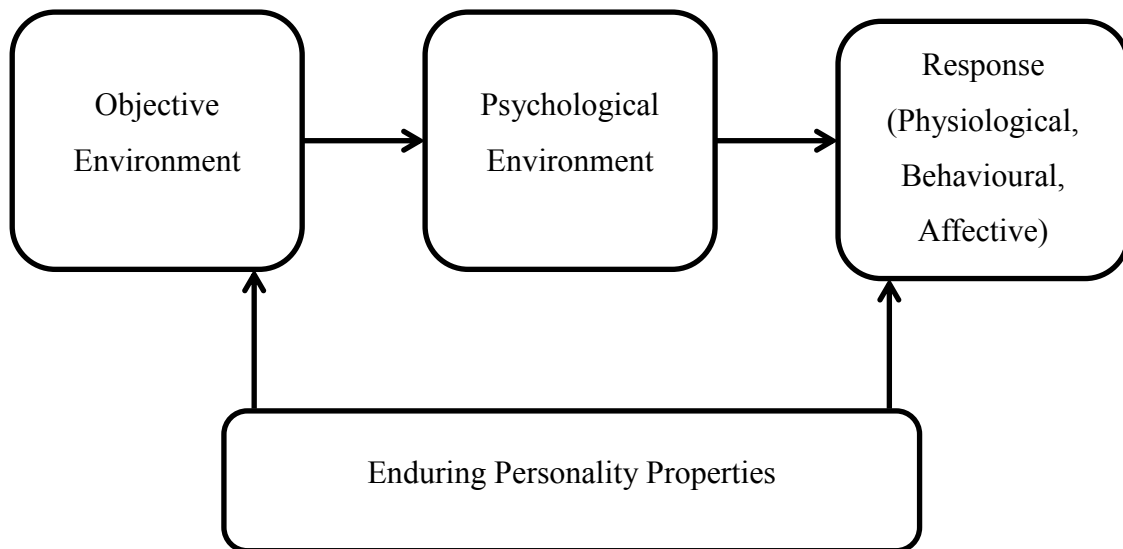
2.3.1 Stress Cycle Model

McGrath (1976) developed the SCM, where stressors and their outcomes are linked by appraisal, decision making, and performance. According to McGrath, stress can

occur when an 'environmental situation is perceived as presenting a demand which threatens to exceed the person's capabilities and resources for meeting it' (1976, 1352). McGrath (1976) suggested appraisal is the process of interpreting demands. Decision making refers to the selection of a response to the demands. Performance refers to how well the situation was managed and how much the encounter affected workplace performance (Cooper et al., 2001). McGrath also included an outcome process, which acts as a feedback mechanism through which the results of the previous stages of the cycle are re-evaluated. According to the SCM, stress is caused by the imbalance between job demands and the individual's ability to cope. An alternate perspective is presented in the Institute for Social Research model (Katz and Kahn, 1978)

2.3.2 Institute for Social Research Model

The Institute for Social Research (ISR) model (Katz and Kahn, 1978) consists of four elements – the objective environment, psychological environment, enduring personality properties, and individual response (physiological, behavioural and affective) (see Figure 2.1). The objective environment is areas of the environment that can be labelled and valued, with the psychological environment referring to the perception of workplace stressors. The response aspect includes reactions to the workplace stressors experienced by an individual. Enduring personal properties accommodate individual differences in personality, personal properties as well as genetic and demographic characteristics (Bliese et al., 2002) that can influence perception of the stressors (Katz and Kahn, 1978, Greenhalgh and Jick, 1989).

Figure 2.1: The Institute for Social Research Model¹

¹ Greenhalgh and Jick (1989, p. 308)

2.3.3 Person-Environment Fit Model

According to the P-E fit model (French and Kahn, 1962, French et al., 1974), stress results from a mismatch between the individual and their environment (Edwards et al., 1998). Person (P) and environmental (E) factors can be described as both objective and subjective (Edwards and Cooper, 1990). Objective P and E refer to 'variables that exist independently of the individuals' perceptions' (Edwards and Cooper, 1990, p. 294); that is, they exist even if the individual is not aware of them. Subjective P and E, on the other hand, refer to variables that are perceived.

There are two major versions of the P-E fit; namely the supplies-values (S-V) fit and demands-abilities (D-A) fit (Edwards and Cooper, 1990, Edwards, 1996). The S-V fit refers to the 'match between a person's values and the environmental supplies available to fulfil those values' (Edwards, 1996, p. 294). From this approach, values are personal values such as motives, interests and goals (Edwards, 1992, Cummings and Cooper, 1979). Supplies are 'the amount, frequency and quality of environmental attributes that may fulfil the person's values' (Edwards, 1996, p. 294), and can be subjective or objective in nature. Research has shown that only the objective supplies from values influence perceived stress (Edwards, 1992). Thus, the S-V fit relies on the cognitive appraisal and acknowledgement of the 'perceived and desired amount, frequency, or quality of conditions or events' (Edwards, 1996, p. 294) experienced by the individual. Strain will increase as the level of supplies is

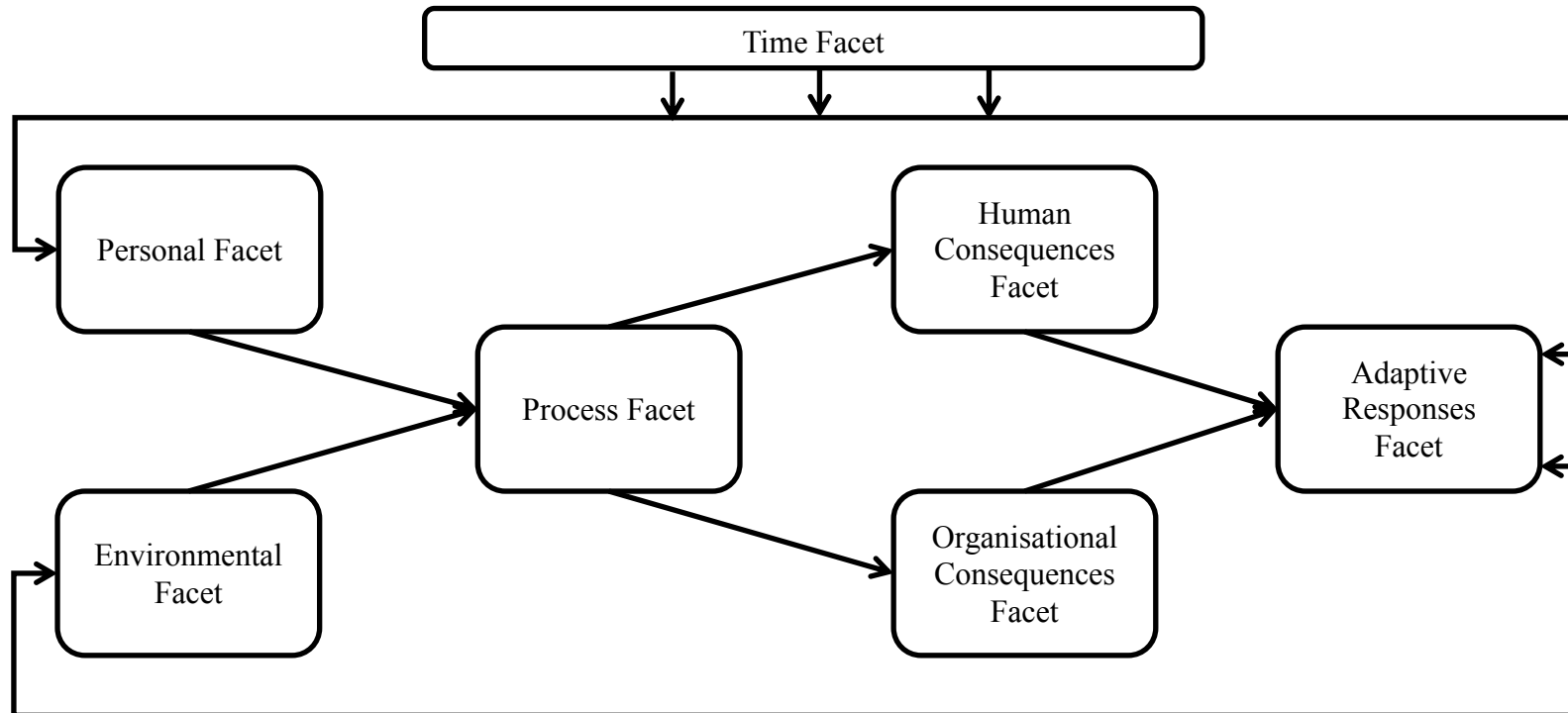
continually less than required to fulfil the values (Cummings and Cooper, 1979), leading to decreased job satisfaction, anxiety, low self-esteem and depression (Blau, 1994, Gati et al., 1996).

The second version, D-A fit, is concerned with the match between a person's ability and environmental demands. Abilities include knowledge, skill, mental and physical energy (Edwards, 1996), while demands refer to formal and informal expectations of the individual. A mismatch between D-A can lead to anxiety, exhaustion, and dissatisfaction (Edwards, 1996, Edwards et al., 1998).

2.3.4 General Model of Stress

Beehr and Newman's (1978) general model of stress (GMS) was based on a facet analysis of the literature (see Figure 2.2). According to Beehr and Newman by analysing the seven facets of job stress, the significance of job stress can be better understood. Addressing the particular facet deemed to be the origin of the stress would be expected to decrease stress experienced by a given individual. The main strength of the GMS is its wide-spread applicability. Through general categorisations, the facets are customised to suit the context the model is applied in.

Figure 2.2: General Model of Stress¹



¹ Beehr and Newman (1978, p. 676)

The environmental facet refers to elements of the work environment that can lead to job stress (Beehr and Newman, 1978). While this facet is primarily concerned with the workplace environment, it also encompasses stressors beyond work, like travel to and from work.

The personal facet refers to individual characteristics that influence the perception of stressful events, their classification of situations as stressful, and therefore their reaction to stress (Beehr and Newman, 1978). Characteristics shown to influence stress include age (Theorell, 1976), cognitive ability (Sales, 1974), personality (Lyons, 1971, Beehr et al., 1976, Caplan and Jones, 1975) and physical condition (Hennigan and Wortham, 1975).

The process facet, ‘represents the physiological and psychological processes that link the environmental and personal facets to each other and to the consequences and adaptive response facets’ (Beehr and Newman, 1978, p. 674-675). Psychological processes enable the stressful situation to be perceived and appraised; they also allow appropriate responses to be determined and evaluated.

The human consequence facet encompasses physical, psychological and behavioural consequences. The physical aspects include a range of physical conditions and ailments, with the psychological aspects referring to various psychiatric conditions from depression to psychosis. Behavioural consequences are arguably the widest classification encompassing drug use, vandalism, poor interpersonal relationships, and aggressive acts, among others (Beehr and Newman, 1978).

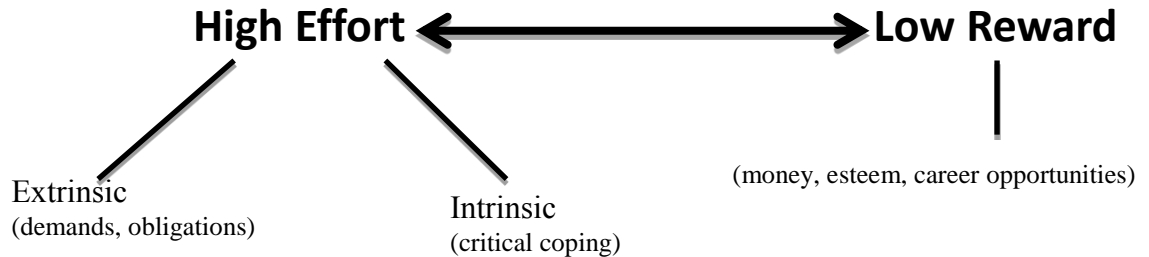
The organisational consequences facet is concerned with the impact of job stress on an organisation. It is measured by investigating change in quality of job performance, withdrawal behaviour, profits, and/or influence of supervisors (Beehr and Newman, 1978). The adaptive response facet refers to the coping mechanisms that the individuals or organisations can adopt to limit the occurrence and impact of job stress. The final facet, time, illustrates that manifestations of the other facets require time to develop or exhibit the complete side effects of various adaptive strategies.

2.3.5 Effort-Rewards Imbalance Model

Formed by Siegrist (1996, 1998), the E-RI model focuses on the relationship between the physical and psychological demands of work and the expected rewards to compensate (see Figure 2.3). The E-RI model proposes that an imbalance between

job costs and rewards can produce emotional distress and lead to physical and psychological symptoms (De Jong et al., 2000).

Figure 2.3: The Effort Rewards Imbalance Model¹



¹ Siegrist (1996, p. 30)

The ER-I is only applicable to limited contexts (Siegrist, 1996). In certain situations although an imbalance may occur, the consequences of rectifying the situation or protecting the individual will have a far greater impact on the individual than the imbalance, hence individuals may not openly disclose signs of distress. Among blue collar workers, although many may lack future career opportunities, they may take no action due to the potential loss of employment (De Jong et al., 2000).

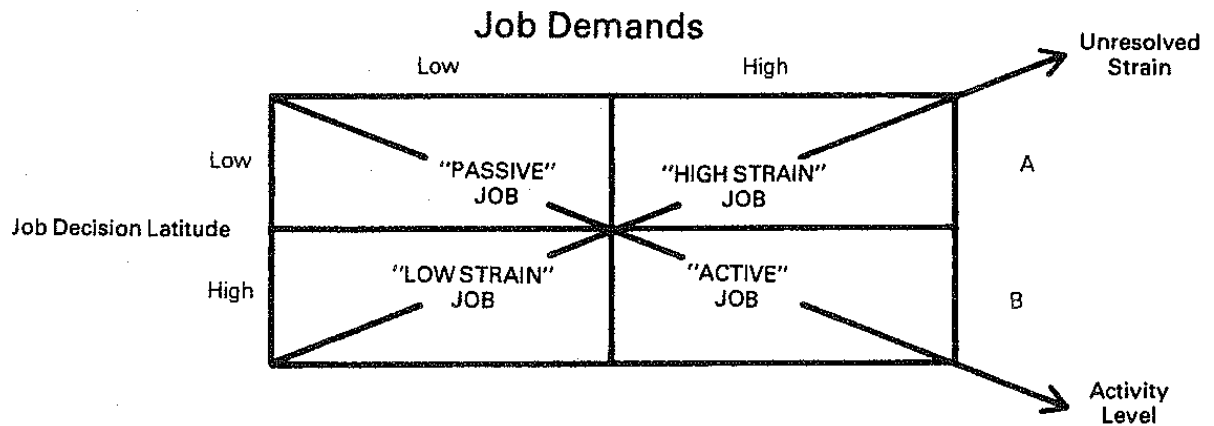
2.3.6 Job Demands-Control Model

Karasek's (1979) JD-C model proposes that mental strain results from an imbalance between psychological job demands and job decision latitude (De Jong et al., 2000, Karasek et al., 1981). According to the JD-C model 'job strain occurs when job demands are high and job decision latitude is low' (Karasek, 1979, p. 287). Psychological job demands are the 'psychological stressors involved in accomplishing the work load, stressors related to unexpected tasks, and stressors of job-related personal conflict' (Karasek, 1979, p. 291). Job demands are measured by role conflict and time pressure (Karasek and Theorell, 1990, Rijk et al., 1998). Under the JD-C model, the definition of job demands is purely psychological; it does not include physical strains or job uncertainty.

Job decision latitude relates to the level of perceived control over tasks and the perceived flexibility to complete the tasks (De Jong et al., 2000). Accordingly, the job decision latitude is measured via decision authority and intellectual discretion (Karasek, 1979). Under the JD-C model, psychological strain occurs when job demands are not offset by adequate levels of job decision latitude. The JD-C model

also suggest that when high job demands are fairly compensated with decision latitude, these jobs are categorised as active jobs (Karasek and Theorell, 1990, Rijk et al., 1998), which foster growth and personal development (see Figure 2.4).

Figure 2.4: Job Demands-Control Model¹



¹ Karasek (1979, p. 288)

The JD-C model has received both methodological and conceptual criticisms. The initial validation studies were undertaken on large heterogeneous samples, limiting the applicability of the model to homogenous groups (Karasek et al., 1981, Karasek, 1979, Kauppinen-Toropainen et al., 1983). The simplicity of the elements can lead researchers to misinterpret the components, rendering their research findings incomparable (Rijk et al., 1998).

Despite these shortcomings, the JD-C model is a base for many subsequent job strain models. Johnson (1986) argued that job decision latitude was only one psychological resource that could buffer the negative effects of job demands, putting forward the case that social support could offer similar benefits to job control. The workings of Karasek were further developed by Johnson with the formation of the JD-CS model.

2.3.7 Job Demands-Control Support Model

Johnson (1986) along with Hall (Johnson and Hall, 1988b), formulated the JD-CS model. The inclusion of social support was justified by Medalie and colleagues (1973) who discovered that insufficient work socialisation and social support was associated with higher rates of angina. This suggests that social support can decrease the job demands and therefore job strain. Like the JD-C model, the JD-CS model

focuses on the psychological stressors of work-life and does not account for other types of stressors.

Social support can mitigate strain (Haly, 2009). Some argue this occurs independent of job stressors (Loscocco and Spitze, 1990, Parasuraman et al., 1992), while others believe that social support can buffer the stressor-strain relationship (LaRocco et al., 1980, Beehr et al., 1990, Viswesvaran et al., 1999). Although the JD-CS model was an improvement of the JD-C model, it only included one of many potential psychological resources can lessen the impact of the work-related demands and therefore was not fully embraced (Demerouti et al., 2001c). To address this shortfall, Demerouti and colleagues established the JD-R model (2001c).

2.3.8 Job Demands-Resources Model

The JD-R model, created by Demerouti and colleagues (2001c), has two primary differences compared to its predecessors. First, job demands are expanded to include physiological and psychological elements; this differs from previous models (Karasek, 1979, Johnson and Hall, 1988b). Accordingly, job demands refer to ‘those physical, social or organisational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs’ (Demerouti et al., 2001c, 501). Thus the JD-R model accounts for both the mental and physical tolls of the work environment. Second, the JD-R model expands the components that lessen the impact of the job demands. Previously, job demands were believed to be compensated by decision latitude (Karasek, 1979) or social support (Johnson, 1986, Johnson and Hall, 1988b). The JD-R model proposes that job demands are offset by job resources which are aspects of the job that reduce job demands; encourage development and personal growth; and are functional in achieving work-related goals (Demerouti et al., 2001c, Bakker and Demerouti, 2007, Bakker et al., 2004).

According to Demerouti and colleagues (2001c), job strain occurs through three avenues. First, strain occurs when an individual is consistently exposed to extreme levels of job demands that overtax any personal ability to withstand such demands (Demerouti et al., 2001c). Second, strain is the result of an unacceptable availability of job resources, hindering one’s capacity to complete work-related tasks (Bakker et al., 2004). Third, job strain occurs when job demands are not being offset by job

resources. The JD-R model can also be reversed. Bakker and colleagues (2004) demonstrated that increasing the level and availability of job resources, an organisation could benefit from increased employee capacity. Through increased job resources, individuals can actively engage in their work, and perform better and more sustainably, relative to those who are under-resourced.

Despite its wide use, the JD-R lacks structure and does not account for resource investment, resource protection, and the primacy of resource loss (Akhtar and Lee, 2010) unlike CoR theory (Hobfoll et al., 1990, Hobfoll, 1988, Hobfoll, 1989). The wide applicability of the model, despite being its main strength, also results in the model being too generic.

2.3.9 Conservation of Resources Theory

CoR theory, developed by Hobfoll (1989, p. 516), states that ‘people strive to retain, protect, and build resources and that what is threatening to them is the potential or actual loss of these valued resources.’ Hobfoll (1989) classifies resources as object resources; conditions; personal characteristics; and energies. Object resources are tangible resources that individuals seek to earn or maintain. They are considered valuable due to their physical nature or associated status based on their rarity or expense (Hobfoll, 1989). Conditions include relationships, job security, seniority, and marriage. Personal characteristics influence the way individuals perceive the world and evaluate stressful situations. In this way, personal skills and traits minimise the impact of stress (Hobfoll, 1985). Energies refer to resources such as money, time, and knowledge. Although not perceived as intrinsically valuable, energies become valuable due to the way they help to attain other valued resources (Hobfoll, 1989).

The origins of the CoR theory can be traced back to Freud (1900). Freud was well-known for proposing the ‘pleasure principle’ the instinctively seek experiences that are pleasurable, and avoid suffering to gratify psychological and biological needs (Snyder and Lopez, 2007, Smith, 1977, Freud, 1900). The pleasure principle is translated in the CoR framework (Hobfoll, 1988) as the attaining and maintaining of resources that are considered valuable.

Similar to the JD-R model (Demerouti et al., 2001c), the CoR theory conceives stress purely as a psychological state. As with the JD-R model, it is assumed that any

physical ailments consequent to stress are due to the influence of psychological stressors. According to the CoR framework, stress is a ‘reaction to the environment in which there is a threat of a net loss of resources, the net loss of resources or a lack of resource gain following the investment of resources’ (Hobfoll, 1989, p. 516). The CoR framework encompasses two interwoven concepts that are vital to the theoretical standpoint, including primacy of loss and resource investment.

2.3.9.1 Primacy of Loss

According to the primacy of loss principle, losses have a greater effect on an individual than similar sized gains (Hobfoll, 2001). Tversky and Kahneman (1974) state that individuals are more concerned with retaining current resources, compared to the gains they could achieve. Similarly Taylor (1991) concluded that negative events evoke far stronger physiological, cognitive, social, and emotional responses than positive or neutral experiences. Therefore, individuals are psychologically more concerned with avoiding loss than gaining potential benefits. Within alternate models there is limited recognition of the primacy of loss.

2.3.9.2 Resource Investment

Resource investment suggests individuals’ ‘invest resources in order to protect against resource loss, recover from losses and gain resources’ (Westman et al., 2004, 169). According to Hobfoll and colleagues (1990), the only commodity that individuals have to protect their resources is other personal resources. For example, individuals can invest both self-esteem and finances to increase their physical health, and in this situation, this investment was required to gain physical health (Hobfoll et al., 1990, Westman et al., 2004).

2.3.9.3 Criticisms

CoR theory has been criticised for the suggested influence of personality traits and the negative orientation of the framework. According to Hobfoll (2001), perceptions of resource loss are heavily influenced by the personality traits of neuroticism and extroversion, with the potential to cause a misrepresentation of their actual levels of loss. This limitation will have little effect on the outcome because according to CoR theory stress is a psychological state, therefore what is perceived is the reality for the participants (Hobfoll, 1988, Hobfoll, 1989).

The CoR theory has also been criticised for its focus on the negative outcomes of resource changes. The negative effects of loss, like negative emotions and poor wellbeing, are well-documented (Hobfoll et al., 1990, Taylor, 1991). However CoR theory fails to recognise the positive effects following the loss of resources (Akhtar and Lee, 2010). For example, Janssen and colleagues (Janssen et al., 1999) conducted a study on Dutch nurses indicating that successfully overcoming low levels of job demands can have a beneficial impact on perceived competence.

2.3.10 Integrated Job Stress Model

Building on the foundations of the JD-R model (Demerouti et al., 2001c) and the CoR theory (Hobfoll, 1988, Hobfoll, 1989), Akhtar and Lee (2010) merged the two to form the IJSM. The IJSM integrates the assumptions of its parent models for a more comprehensive understanding of the formation and impact of job stress. This is further achieved by creating its own combination of contributors to resources and demands. For example, like the JD-R model, the IJSM assumes a ‘positive path between job demands and emotional exhaustion, and a negative path from job resources to depersonalisation’ (Akhtar and Lee, 2010, 197); and, like the CoR theory, it suggests that high job demands can threaten resources and give rise to emotional exhaustion and depersonalisation. However, Akhtar and Lee advise, ‘resource investment is implicated in directly influencing recovery from resource losses, as exemplified by an individual’s experience of reduced emotional exhaustion and depersonalization’ (2010, p. 198). The model was validated confirming its legitimacy.

The IJSM also recognises the importance of resource investment and resource protection while still remaining applicable to a variety of contexts. Unlike the JD-R model, the IJSM recognises the role of resource investment, resource protection, and the primitive instincts regarding resource loss. Studies suggest that attaining and retaining resources influence the stress experienced (Pearlin et al., 1981, Hobfoll, 2001, Taylor, 1991, Suh et al., 1996); thus resource depletion warrants a higher priority, as per the IJSM. Second, the IJSM is applicable to a greater range of contexts than the JD-R model. The JD-R model (Demerouti et al., 2001c) relates specifically to job-related resources and demands, much to the neglect of those outside the work environment. The CoR framework on the other hand is relatively more generic and can therefore be applied to a variety of situations.

The IJSM was adopted for this study as it explores the impact that practice related demands and resources have on the GP while recognising the primacy of loss. Within wider society, individuals typically focus on ensuring there are adequate rewards to compensate for the demands they face. However, particularly when considering resources to which the individual has an emotional bond to, the equation is not as simple. Therefore the IJSM (Akhtar and Lee, 2010) was used as it encompasses the complexities surrounding the formation of job-related stress.

2.4 Occupational Stress

With the increasing pace of life, additional demands have increased the prevalence of stress within society (Honkonena et al., 2006). Ertel and Kortum (2003, p. 35) focused on occupational stress, defining stress as a ‘pattern of emotional, cognitive, behavioural and physiological reactions to adverse and noxious aspects of work content, work organization and work environment’. More succinctly, occupational stress occurs when work-related environmental conditions or events have negative effects on employee health and wellbeing. Moving specifically to GPs, this is now addressed below.

2.4.1 Occupational Stress in General Practice

Although prevalent in the wider community (Honkonena et al., 2006), GPs are extremely susceptible to stress (Firth-Cozens and Moss, 1998, Dolatowski et al., 2007). Coman and Schattner (1998) found that 92% of Australian GPs felt stressed, with 11% experiencing severe stress and 81% labelling their stress as ‘mild’ or ‘moderate’. Coman and Schattner also found this experience did not abate over a 12-month period. More alarming, however, was the finding that 53% of respondents considered abandoning their profession because of stress. Although only intentions, intention to quit is used to predict future turnover as after the individual has ‘actually implemented the behaviour to quit, there is little likelihood of gaining access to them to understand their prior situation’ (Firth et al., 2004, p. 117). Once an individual has quit, there is little chance of finding out the real motives for their action.

GP stress has been shown to be exacerbated by workload – that is, the amount, the pace, as well as the psychological and physical costs of work (Appleton et al., 1998, Bergman et al., 2003, Michie and West, 2004). This experience is not unique to Australia, with international studies revealing similar trends (e.g. Dua, 1996,

Schattner and Coman, 1998, Revicki and May, 1983). For instance, among American family physicians, May and Revicki (1983) found four key factors contributed to stress – (1) internal professional stress (e.g., dissatisfaction with professional development and life); (2) perceived work productivity (e.g., meeting professional and work expectations); (3) interference with family life (e.g., work commitments interfere with family life); and (4) external professional stress (e.g., perception of social and formal support from others). Schattner and Coman (1998) found similar contributors among Australian GPs, notably, (1) workload; (2) economic factors; (3) medico-political factors; (4) clinical factors; (5) effects of work on outside life; and (6) the physical working environment. Despite contextual differences, these studies collectively suggest that GP-stress is exacerbated by patient-load, administration, and the work-life balance (Butler and Skattebo, 2004, Chandola et al., 2004, Van Den Hombergh et al., 2009). Each is addressed in turn.

2.4.1.1 General Practitioner Workload

Due to their position within the healthcare system, GPs consult patients with a large range of ailments of varying severity (Nielsen and Tulinius, 2009). The variety of people GPs consult can have a physical and an emotional toll on the GP (Van Dierendonck et al., 1994, Van Den Hombergh et al., 2009), in turn intensifying GP workload. Bakker and colleagues (2009) found that GPs who devoted more time per patient, indicative of a non-excessive workload, provided a greater level of care and better personal wellbeing. Bergman and colleagues (2003) provided support for the influence that workload has on wellbeing, articulating that workload was a primary predictor of stress and the physical and psychological ailments often associated with stress.

Due to the ageing population, the prevalence of chronic health conditions has increased dramatically (Britt et al., 2013, Kidd, 2010). According to Britt and colleagues (2013) by the year 2053 approximately 25% of the population will be over 65 years of age, with a corresponding increase in levels of chronic disease expected. According to the Australian Institute of Health and Welfare (2013a), examples of chronic health conditions prevalent in Australia are coronary heart disease, strokes, lung cancer, colorectal cancer, depression, type 2 diabetes, arthritis, osteoporosis, asthma, chronic obstructive pulmonary disease, chronic kidney disease

and oral disease. Given their complexity and chronicity, these issues can be difficult for GPs to effectively manage (Rollins, 2013).

Recent health reforms have seen a greater importance placed on general practice in the management of chronic health conditions (Australian Institute of Health and Welfare, 2012a, Kidd, 2010). Rollins (2013) investigated the length of consultation times with patients presenting with type 2 diabetes, concluding that such consultations took twice as long as the average time the GP typically allocated to their patients. Particularly with type 2 diabetes, 97% of patients presenting with this condition have at least one other chronic condition. With the recent Government reforms, the role of the GP in the management of such conditions has increased creating greater time pressures on already time poor GPs (Kidd, 2010), further intensifying GP workload. In addition to the greater role in the management of chronic health conditions, GPs are also impacted through various administrative and other reforms.

2.4.1.2 Bureaucracy

Government administrative requirements can be a major source of stress for GPs, restraining their working environment. Bracey (2013b) found that some GPs spend as long as nine hours a week dealing with bureaucratic red tape. Eley and colleagues (2007) identified that this was a significant stressor for many Australian GPs. According to Eley and colleagues, governments were too willing to ‘impose restrictions but not provide alternatives or adequate [levels of] support’ (2007, p. 17). Through being perceived in this way, some Government initiatives have had the opposite effect to what was intended.

GPs have also been effected by other Government initiatives, adding further complexity to their role (Bracey, 2013b). Recent government initiatives have necessitated electronic patient records under the ‘Personally Controlled Electronic Health Records’ scheme. Previously patient records were curated on a local, practice-level base, with the practice being able to elect their chosen format for record keeping (manual or electronic). Recent Government initiatives have changed this. The establishment of the electronic record keeping system has proven time consuming for GP principals in particular (Bracey, 2013b, Bracey, 2013a). Another

Government initiative that has significant time implications for GPs is the pharmaceutical benefits scheme (PBS).

The PBS authority scheme was established to ensure accurate and efficient prescribing of expensive or addictive medications, where the GP is required to telephone a hotline before prescribing the restricted medications. On average over 500,000 calls are made by GPs on a monthly basis (Bracey, 2013b), which again is very time consuming for the GP. Although some restrictions are warranted, it is widely believed that the current scheme is too complex, creating inefficiencies and imposing excessive time demands (Bracey, 2013a, Iannuzzi, 2012). Despite their intended benefits, various Government initiatives further complicate the role of a GP, and in some cases even being a major contributor of stress.

2.4.1.3 Impact of Work-Life Balance

GP stress is exacerbated by WFC or work-family interference (WFI). WFC occurs when ‘pressures from the work and family (life) roles are mutually incompatible, such that participation in one role makes it difficult to participate in the other’ (Montgomery et al., 2006b, p. 37). WFC refers to the balance, conflict, and facilitation between work and non-work domains (Ozbilgin et al., 2011). In addition to the physical time spent in a particular domain, it also covers the mental strains that often overlap from one domain into the other (Greenhaus and Beutell, 1985). Fenner and colleagues (2007) demonstrated the benefit of lower levels of WFC in the medical profession, suggesting WFC to be a major source of stress.

2.4.2 Impact of General Practitioner Stress

GP stress can impact on their wellbeing, the quality of patient care and increase intentions to quit the profession. Due to the demanding nature of their role (Nielsen and Tulinius, 2009), the wellbeing of the GP is often compromised (Firth-Cozens, 2001). Research has illustrated links between GP-stress and physical ailments, ranging from headaches (Burke, 1988) to cardiovascular disease (Peter and Siegrist, 2000). Buddeberg-Fischer and colleagues (2008) found a substantial proportion of GPs experience anxiety and depression. This is of concern because individuals with mental health ailments are less likely to seek help relative to those with physical complaints (Biddle et al., 2004); Furthermore, GPs who experience poor wellbeing

are 70% more likely to die as a direct result of suicide or self-harm, relative to the general population (Biloa et al., 2000).

Past studies have shown that stress reduced the quality of patient care (Linzer et al., 2009, Nash et al., 2010). When GPs experience stress, there is the potential for depersonalisation (Caplan, 1994) where patients are perceived as objects, rather than people. Nash and colleagues (2010) identified that when the mental health of the physician is compromised, the potential for a medical related error increases dramatically.

Continued exposure to work-stress can lead to burnout – an acute form of psychological strain (Ashill et al., 2009, Demerouti and Halberleben, 2005). According to Maslach (1976) burnout consists of three factors – emotional exhaustion, depersonalisation, and reduced personal accomplishment. Research has shown that individuals cease employment when they feel overwhelmed, experience extreme levels of job stress, have low job satisfaction, or feel undervalued (Firth et al., 2004, Greenhaus and Beutell, 1985). Therefore GPs who have been exposed to continual levels of stress are more inclined to quit their profession (Simoens et al., 2002). Within Australia, the stressors of general practice have been shown to drive retirement intentions among the ageing GP workforce (Schofield and Beard, 2005, Rachootin, 2010, Brett et al., 2009). These factors may exacerbate GP-shortages and diminish workforce capacity (Sibbald et al., 2003). Given the increasing importance of community-based healthcare (Honey and North, 2009), and the ageing population in many Western nations (Lutz et al., 2008), this constitutes a significant problem. An additional source of stress for GPs is work-family conflict (Walker and Pirota, 2007).

2.5 Work-Family Conflict

WFC occurs when demands from work and family domains are incompatible, that participating in one will make meeting the others demands impossible (Montgomery et al., 2006b, Ozbilgin et al., 2011, Haar, 2006). Traditionally WFC was conceptualised as comprised of two facets - work interference with family (WIF) and family interference with work (FIW) (Byron, 2005, O'Driscoll et al., 1992, Frone et al., 1997). The demands of each domain can transcend geographical barriers through the carryover feelings of strain from one domain to another.

Due to the intensifying demands of work-life, more two-income families, and the rising number of working mothers (Tuttle and Michael, 2009, Son and Bauer, 2010), levels of WFC have risen in recent years (Gallie and Russell, 2009). WLB is particularly relevant to the medical profession. Keeton and colleagues (2007) found WFC to be a major source of stress among American medical practitioners. High levels of WFC have been linked to reduced job commitment (Hammer et al., 2003), increased absenteeism (Goff et al., 1990), reduced work performance (Butler and Skattebo, 2004), and increased intentions to quit the profession (Chandola et al., 2004, Boyar et al., 2003).

WFC was further investigated by Hammer and colleagues (2003) focusing on the distribution of family roles, particularly concerning child rearing. When WIF occurred among women, they were increasingly interrupted from family duties and would arrive home later due to work pressures. FIW was only associated with short interruptions throughout the day and rarely resulted in lateness or absence from work. The most reliable predictor of WIF for males was absence from work. Hammer and colleagues concluded that WFC was a major concern for both wives and husbands, leading to decreased job commitment.

Boyar and colleagues (2003) investigated the relationship between WFC and intention to quit, which was defined as a 'conscious and deliberate wilfulness to leave the organisation' (Tett and Meyer, 1993, 262). According to Boyar and colleagues (2003) FIW and WIF were associated with increased turnover intentions. The strongest predictor of turnover was shown to be WIF. Their findings are similar to those of Greenhaus and colleagues (2001) who found that when faced with WIF, employees seek ways to relieve that tension. This typically resulted in the individual withdrawing from their work rather than their family to solve the conflict. Thus, WFC can often intensify the intention to quit (Chandola et al., 2004, Boyar et al., 2003).

WFC can induce great levels of stress from both work and family domains (Boyar et al., 2003). Thanacoody and colleagues (2009) found significant links between WFC, job stress, and burnout. Stress was associated with high levels of WFC often resulting in emotional exhaustion and reduced personal accomplishment, thus increasing the levels of physician burnout. Although their study involved physicians

working with cancer patients, there is also evidence of similar impacts on GPs, which is presented in the following section.

2.5.1 Work-Family Conflict in General Practice

Due to the demanding nature of general practice, GPs are very susceptible to WFC (Swanson et al., 1998, Rout, 1996, Walker and Pirotta, 2007). WFC has largely been fuelled by dual income families (Raley et al., 2006) and the changes in traditional gender roles within the home (Berridge et al., 2009). These trends, coupled with the demands of general practice can cause WFC, decreasing GP wellbeing and the quality of patient care.

Rout (1996) surveyed GPs and their spouses to investigate the occurrence and implications of WFC. When workplace demands increased, interest in and time for family decreased. This had the potential to lead to communication problems within the home, resulting in the intensification of marital problems and therefore associated stress. Swanson and colleagues (1998) found that an increase in work-related demands caused increased tension in the home setting for both male and female doctors, with GPs experiencing higher levels of WFC.

Within Australia, Walker and Pirotta (2007) suggested that WFC is a major problem for a considerable proportion of GPs. Although WFC was a concern for both male and female GPs, female GPs were able to attain and retain a greater work-life balance. Female respondents gained greater work-life balance by working fewer hours and being less likely to be a practice principal.

WFC can invoke high levels of stress (Keeton et al., 2007, Greenhaus and Beutell, 1985, Greenhaus et al., 2001, Swanson et al., 1996, Swanson et al., 1998). Stress has been shown to decrease the wellbeing of the individual (Buddeberg-Fischer et al., 2008) and decrease the quality of patient care (Dyrbye et al., 2010a, Dyrbye et al., 2010b). In addition stress has been linked to headaches (Burke, 1988), cardiovascular disease (Peter and Siegrist, 2000), as well as anxiety and clinical depression (Buddeberg-Fischer et al., 2008), all of which will lessen the wellbeing of the individual. Stress can also affect the quality of patient care (Dyrbye et al., 2010a, Dyrbye et al., 2010b). When GPs experience stress, there is the potential for depersonalisation (Caplan, 1994) where individuals seeking help are perceived as objects, rather than people. This is supported by the Halbesleben and Rathert (2008)

who found a significant relationship between physician depersonalisation and a diminished quality of patient care.

2.6 Burnout

Due to the debate regarding what specifically constitutes burnout, and what is best described by other conditions, the definition of burnout itself is not straight forward (Maslach et al., 2001). This confusion is largely because burnout is typically defined by the primary measurement tool rather than the condition itself. Many theorists define burnout according to the Maslach burnout inventory (MBI), with burnout being ‘a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment that can occur among individuals who do people work of some kind’ (Maslach, 1982, p. 3). Halbesleben and Demerouti (2005, p. 208) perceive burnout to be a ‘psychological response to chronic work stress’, while others define it as ‘a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do people work of some kind’ (Maslach and Jackson, 1981b, p. 99). More comprehensively, burnout refers to a psychological state consequent to continued exposure to intense levels of work and family-related stress (Ashill et al., 2009).

2.6.1 Historical Overview

Based on the works of Freudenberger (1974, 1975), Ginsburg (1974) and Maslach (1976), the concept of burnout was formally established in the mid 1970’s. Despite their differing contexts and conclusions, the insights from these studies highlighted a path for future development and understanding of burnout.

While working in a medical clinic, Freudenberger (1974, 1975) realised that some volunteers had become run down over time while others were seemingly unaffected, leading to the question of what traits made the volunteers more prone to exhaustion. Freudenberger discovered that the primary reasons for this degradation were the increasing stress levels and lack of effective leadership. These experiences resulted in increased levels of mental and physical conditions as well as exhaustion. Freudenberger concluded that those who are more prone to burnout are the ‘dedicated and the committed’ (Freudenberger, 1974, p. 161), as they are overly invested and not having adequate support and respite, are likely to experience burnout.

Ginsburg (1974) investigated the psychological tolls associated to the work environment of upwardly moving executives. He suggested that the chronic stressors the executives were exposed to resulted in the formation of burnout. Similarly Freudenberger (1974) investigated the types of people more susceptible to burnout. As a result it was articulated that people who experience burnout are typically those who are extremely applied to their work, providing levels of mental and cognitive effort that far exceed typical expectations, similar to Freudenberger (1974).

Maslach (1976) investigated emotional stress in the human services sector. She discovered that the development of coping mechanisms had important implications for professional life and job behaviour (Maslach et al., 2001). Maslach (1976) concentrated on how individuals coped with emotional arousal at work and in doing so formally founded the concept of burnout. Informed by Freudenberger (1974), Maslach defined burnout as ‘a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment that can occur among individuals who do people work of some kind’ (1982, p. 3). Initial studies into burnout were conducted in sectors involving considerable amounts of ‘people work’ (Freudenberger, 1974, Freudenberger, 1975, Ginsburg, 1974, Maslach, 1976).

Since then, others have studied the effects of extreme work stress and have identified different features of burnout (Dworkin et al., 2003, Warnath and Shelton, 1976). Warnath and Shelton (1976) found burnout decreased commitment to work. A study involving child abuse caseworkers found that burnout resulted from a cocktail of negative emotions including powerlessness, isolation, meaninglessness, and estrangement (Berkeley Planning Associates, 1977).

Extending earlier works, Freudenberger (1977) examined burnout among child caseworkers, citing unmanageable workloads as a major contributor. Furthermore, burnout was associated with a degradation of the quality of service provided. Caseworkers typically endure work-related demands because of the sense of fulfilment they experience from being of practical assistance to young people. When this service is hampered they become disappointed, experience exhaustion and become burnt out. Based on this understanding, the more committed a worker was to their clients and job, the increased susceptibility to burnout. Similarly Maslach and Pines (1977) researched the effects of burnout among workers who support people

with physical, social and psychological issues. As a result of their study the primary causes of burnout were workload and staff to client ratios.

A major development regarding the understanding of burnout occurred during to Maslach and Jackson's (1979) study of police officers and their spouses ($n=130$), effectively incorporating burnout and WFC. This study also formed the groundwork for future development of the Maslach Burnout Inventory (MBI) through the conceptualisation of burnout to consist of 'emotional exhaustion and cynicism, negative feelings towards others and self, detachment, and lower self-appraisal of job productivity' (Perlman and Hartman, 1982, p. 289).

2.6.2 Primary Models of Burnout

Over time three primary models have been developed to understand the formation and significance of burnout in organisational settings – (1) the MBI (Maslach and Jackson, 1981b, Maslach and Jackson, 1981a); (2) the Oldenburg burnout inventory (OLBI) (Demerouti et al., 2002); and (3) the Copenhagen burnout inventory (CBI) (Kristensen et al., 2005). Each is discussed in turn.

2.6.2.1 Maslach Burnout Inventory

In 1981, Maslach and Jackson formulated the MBI (1981b, 1981a), which has since become the primary measurement of burnout (Halbesleben and Buckley, 2004, Schutte et al., 2000). The MBI (Maslach and Jackson, 1981b, Maslach and Jackson, 1981a) is a 22-Item scale which includes emotional exhaustion (9 items); the development of negative attitudes towards service recipients, or depersonalisation (5 items); and a tendency to evaluate oneself negatively with regards to one's work, or reduced personal accomplishment (8 items); each discussed in turn.

Emotional exhaustion refers to an extreme level of fatigue caused by consistent exposure to high levels of cognitive demands (Bakker et al., 2004, Maslach et al., 1996). Most theorists believe that emotional exhaustion is the key contributor to burnout as it has been shown to predict the other two elements, depersonalisation and reduced personal accomplishment (Lee and Ashorth, 1993, Demerouti and Nachreiner, 1996, Maslach et al., 1996).

Depersonalisation refers to attempts by an individual to distance themselves from their clients/patients through cynicism caused by levels of discouragement and

exhaustion (Maslach et al., 2001). According to the later works of Maslach and colleagues (1996, p. 4), the depersonalisation subscale focuses on measuring ‘an unfeeling and impersonal response toward recipients of one’s service, care, treatment or instruction.’ In some professions, an element of depersonalisation is condoned to minimise the psychological tolls of conducting ones job (Maslach and Pines, 1977). In the past, this technique was used to treat patients objectively, and is formally called ‘detached concern’ (Lief and Forx, 1963). Depersonalisation referred to in the MBI is far greater than that justified as ‘detached concern’.

Reduced personal accomplishment refers to a decline in self-evaluated competence or productivity in regards to work-related tasks (Halbesleben and Demerouti, 2005). To measure this component, the MBI’s sub-scale measures ‘feelings of competence and successful achievement in one’s work with people’ (Maslach et al., 1996, p. 4).

The MBI was originally designed for service workers and was not relevant to all occupations (Golembiewski and Munzenrider, 1988, Pines and Aronson, 1988). To make the MBI applicable beyond human services the Maslach burnout inventory – general survey (MBI-GS) (Schaufeli et al., 1996) was created. The MBI-GS was validated by Schutte and colleagues (2000), confirming the models credibility and factor structure. The MBI was later adapted to increase relevance to other industries.

The MBI was further modified to increase its relevance to the education industry (Maslach et al., 1996). The Maslach burnout inventory – educators survey (MBI-ES) was validated by Kokkinos (2006) in a study of Greek teachers ($n=771$). Kokkinos found support for the three-factor conceptualisation of the MBI-ES. The consistencies within the factors were satisfactory and congruent to the original MBI. Despite the attempts to increase the applicability of the MBI, various theorists no longer believe that the MBI, is the ideal measurement of burnout.

Many argue the MBI is no longer the best measure of burnout (Kristensen et al., 2005, Halbesleben and Demerouti, 2005, Demerouti and Halberleben, 2005). Some suggest burnout would be best measured using a two-factor framework, based on the belief that the deviation of personal accomplishment is unrelated to that of emotional exhaustion and depersonalisation (Lee and Ashforth, 1996, Leiter, 1993). Others believe that personal accomplishment is not a factor of burnout at all, but rather more

related to other organisational outcomes such as job satisfaction and organisational commitment (Lee and Ashforth, 1996, Halbesleben and Demerouti, 2005).

The MBI has been criticised for two reasons. First, its focus on emotional exhaustion largely overlooks the impact of physical exhaustion (Pines et al., 1981). According to the original framework (Maslach and Jackson, 1981a), emotional exhaustion was a marker for other forms of exhaustion. This assumption prohibits the determination of the levels of physical exhaustion associated with burnout. Second, the MBI has been criticised for phrasing the items in each sub-category in the same direction. Demerouti and colleagues (2001c) observed that the exhaustion and depersonalisation components are worded negatively, while the personal accomplishment section is worded positively. As a self-reported inventory, this can inhibit validity through the artificial clustering of data (Lee and Ashforth, 1990, Demerouti et al., 2001c, Bouman et al., 2002). These shortcomings partly account for the development of subsequent scales, including the Oldenburg Burnout Inventory (OBI).

2.6.2.2 Oldenburg Burnout Inventory

In light of the shortfalls of the MBI, Demerouti (1999) developed the Oldenburg burnout inventory (OLBI). The OLBI is a two-factor measure of burnout comprised of exhaustion and disengagement (Demerouti, 1999, Demerouti et al., 2001c, Halbesleben and Demerouti, 2005). Although similar in nature to the MBI, its constructs have relevance to a wider variety of occupations and contexts and is considered to be more psychometrically sound (Demerouti et al., 2001c).

According to the OLBI exhaustion is a ‘consequence of intensive physical, affective, and cognitive strain’ (Demerouti et al., 2001c, p. 500). By expanding the understanding of exhaustion to include physical strain, the OLBI is applicable to a wider range of professions (Demerouti, 1999, Demerouti et al., 2001c). Disengagement also differs from the depersonalisation element of the MBI; it refers to ‘distancing oneself from one’s work, and experiencing negative attitudes toward the work object, work content, or one’s work in general’ (Demerouti et al., 2001c, p. 501). In general, the disengagement construct measures the attitudes towards a work task compared to the attitudes towards the recipient.

Both components of the model are measured using positively and negatively worded questions (Demerouti et al., 2000, Halbesleben and Demerouti, 2005), which some believe signifies good psychometric practice (Demerouti et al., 2001c). This feature adds validity to the measure. The construct validity of the OLBI was tested by Halbesleben and Demerouti (2005) with American employees ($n=2,599$). Both the OLBI and MBI-GS were used for comparable value. Results suggested that the OLBI is on par or exceeds the MBI-GS, therefore validating the OLBI as a reliable burnout measure.

A major strength of the OLBI is its comparability to the MBI, which is important as the majority of studies have adopted the MBI (Schutte et al., 2000, Bakker et al., 2002). Using both the OLBI and the MBI-GS, Demerouti and colleagues (2001b) found similar levels of burnout. More specifically, the measures of exhaustion in both scales, and the OLBI scale of disengagement and the MBI-GS component of cynicism, shared similar trends and results. This suggests the two inventories are comparable.

2.6.2.3 Copenhagen Burnout Inventory

Relative to the mainstream MBI, the Copenhagen burnout inventory (CBI) provides a more theoretically sound measure of burnout (Borritz and Kristensen, 1999a). Within the CBI, burnout is a ‘state of physical, emotional and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding’ (Schaufeli and Greenglass, 2001, p. 501). The instrument itself was used in the PUMA studies (Borritz and Kristensen, 1999b, Kristensen et al., 2005), which were a five-year long series of prospective intervention studies of employees working in the human service sector investigating burnout, motivation and job satisfaction.

The CBI is a burnout measure that consists of three components: (1) personal burnout; (2) work-related burnout; and (3) client-related burnout (Kristensen et al., 2005, Winwood and Winefield, 2004). Personal burnout, also referred to as the ‘generic burnout scale’ (Milfont et al., 2008), is ‘the degree of physical and psychological fatigue and exhaustion experienced by the person’ (Kristensen et al., 2005, p. 197), regardless of context. Work-related burnout, refers to ‘the degree of physical and psychological fatigue and exhaustion that is perceived by the person as

related to his/her work' (Kristensen et al., 2005, p. 197), measuring burnout associated with client/work demands (Borritz and Kristensen, 1999b, Borritz and Kristensen, 1999a). Client-related burnout refers to 'the degree of physical and psychological fatigue and exhaustion that is perceived by the person as related to his/her work with clients' (Kristensen et al., 2005, p. 197) – however, client is said to be interchangeable with alternate terms, depending on the context of the study (e.g. patient, student etc.).

Through the PUMA studies Kristensen and colleagues (2005) conducted a validation of the CBI. They found all three components to have a very high level of internal reliability, and declared the CBI a valid and reliable measure of burnout. Since its validation, the CBI has been used in numerous studies to understand burnout (Milfont et al., 2008, Yeh et al., 2007, Jordan et al., 2013).

2.6.3 Measures Used

The CBI was adopted due to theoretical, financial, and practical considerations. Theoretically the MBI has been heavily criticised for its overuse, narrow conceptualisation of exhaustion and inclusion of reduced personal accomplishment (Lee and Ashforth, 1996, Leiter, 1993, Pines et al., 1981). Unlike the MBI, the CBI is freely available for usage, thus conforming to the financial constraints of the project. The CBI not only gauges burnout, but also indicates the orientation of burnout (Yeh et al., 2007), which is relevant to the current context.

The MBI is the common measure of burnout, being used in approximately 90% of empirical studies (Kristensen et al., 2005). As the formation of the original MBI, and the conceptualisation of burnout was done simultaneously it has been proposed that 'burnout is what the MBI measures, and the MBI measures what burnout is' (Kristensen et al., 2005, p. 193). Therefore the definition of burnout is too heavily influenced by its primary measure. As the OLBI is theoretically similar to the MBI, it was anticipated that similar criticism could be aimed at that measure also.

In all of its forms, the MBI's conception of exhaustion can be summarised as emotional exhaustion (Maslach, 1976, Maslach, 1982, Maslach and Jackson, 1981a, Maslach et al., 1996, Schaufeli et al., 1996), with little consideration of the effects of physical stressors. However the CBI has a broader measurement of exhaustion which

includes physical and emotional exhaustion. Through the broader conceptualisation of exhaustion, the CBI is of better fit to the current context.

The CBI not only measures burnout but also identifies the origination of such feelings (Milfont et al., 2008, Yeh et al., 2007). The CBI is comprised of three measures being personal burnout, work-related burnout, and client-related burnout. These subcategories help to identify the origin of burnout. Given the context, and the array of stresses experienced by GPs, the use of this measure is anticipated to provide further reliability to the findings generated. The CBI was used in this study due as it is considered the most appropriate instrument to measure burnout within the context of the current project.

2.6.4 Burnout and General Practice

Due to the demands of general practice, GPs are extremely susceptible to burnout due to the range of conditions consulted as well as other GP specific demands (Chambers et al., 1996). Research has shown that 25-30 % of all health practitioners experienced burnout as a direct result of their work demands, with figures being significantly higher for GPs (Chambers, 1993, Nielsen and Tulinius, 2009, Gundersen, 2001, Yaman and Soler, 2002). GPs consult directly to a considerable amount of patients presenting with a range of conditions. Due to this variety, the knowledge base that is expected of GPs is extensive. This expectation, as well as difficulty handling patient interactions, have been suggested to be the underlying causes of stress, particularly for younger GPs (Chambers, 1993, Nielsen and Tulinius, 2009).

Sutherland and Cooper (1992) highlighted the increasing stress levels of GPs in the UK, by comparing the stress levels to a previous data set collected in 1987. During this time the work environment had intensified resulting in higher levels of stress and burnout. In particular the increased interruptions from work during non-work hours were shown to be a major source of stress. In addition, GP wellbeing was affected. Sutherland and Cooper (1993) reported similar findings in a subsequent study. In addition Sutherland and Cooper found that male GPs experienced greater levels of depression and anxiety, and burnout. This trend is representative of the typical hours worked by each gender, with on average female GPs logging less hours than their male counterparts (Walker and Pirota, 2007). Sutherland and Cooper (1993)

proposed an additional cause to be the role held within the practice, with male GPs being more likely to be practice principals.

Burnout has also been shown to negatively impact the quality of patient care. Firth-Cozens and Greenhalgh (1997) investigated the links between physician stress and medical mistakes in both GPs and hospital doctors concluding there were 82 cases where burnout or stress were reported to have negatively impacted patient care. True figures are likely to be higher, however doctors are often unwilling to disclose such mistakes in the fear it might affect their future career (Blendon et al., 2002, Sirriyeh et al., 2010, Loren et al., 2010). Of the accidents reported, the chief causes were tiredness (57%), pressure of overwork (28%), depression or anxiety (8%) or personal substance abuse (5%) (Firth-Cozens and Greenhalgh, 1997).

Firth-Cozens (2001) focused on the substance abuse of GPs and the problems that caused with patient care. As a result 17 % of doctors surveyed reported regular binge drinking, with another 4% stating that they were a heavy and frequent user of alcohol. Alarmingly 7% confessed to being under the influence of recreational drugs while practicing. These factors decrease the concentration levels of GPs thus adversely affecting patient care (Firth-Cozens, 2001).

Within Australia, Nash and colleagues (2010) undertook a study of wider health professionals, including a large sample of GPs. As the mental health of the physician reduced through increased burnout, the quality of care greatly decreased. As the mental health of the physician continues to degenerate, the potential for medical errors increases greatly, which not only impact on patient health but can also result in costly malpractice suits.

Burnout can also disengage GPs from their profession, particularly among older GPs. Brett and colleagues (2009) found that burnout accelerated the retirement intentions of 35% of GPs surveyed. According to Brett and colleagues, the level of intention to leave the profession was intensified dissatisfaction with the medical system and their role within it. As GPs experience depersonalisation and reduced personal accomplishment, the satisfaction they receive from their work environment decreases. If levels of satisfaction fail to compensate for the burnout they experience, GPs will seek to minimise the demands placed on them by reducing their work related responsibilities (Brett et al., 2009).

Within general practice burnout has been shown to effect the GP and their patients (Winefield and Anstey, 1991, Shirom and Melamed, 2005). It is associated with substance abuse issues (Firth-Cozens, 2001), suicidal tendencies (Biloa et al., 2000), lower quality of patient care (Nash et al., 2010), and increased intention to quit (Rachootin, 2010, Brett et al., 2009). GP burnout is an important issue worthy of further investigation. According to theorists, the significance and influence of burnout can be minimised through resilience (Dunn et al., 2008, Jensen et al., 2008).

2.7 Resilience

Resilience has the potential to lessen the influence of the stressors GPs face. Resilience is ‘the ability to bounce back from negative emotional experiences and by flexible adaption to the changing demands of stressful experiences’ (Tugade and Frederickson, 2004, p. 320). Resilience minimises the physical and psychological tolls of stress (Ahern et al., 2006, Dunn et al., 2008, Dyrbye et al., 2010a, Jensen et al., 2008). Based on a review of literature, the most widely accepted definition of resilience is as a set of personality characteristics or strengths that moderate the negative effects of the stressors to successfully cope with adversity or change (Ahern et al., 2006, Wagnild and Young, 1993a).

According to Southwick and colleagues (2005a) resilience is comprised of: (1) positive emotions; (2) cognitive flexibility; (3) spirituality; (4) social support; and (5) active coping styles. Although each component individually influences wellbeing, their synergy yields far superior benefits for the individuals involved (Southwick et al., 2005a, Ahern et al., 2006).

Resilient individuals are believed to be optimistic, energetic, and humorous (Southwick et al., 2005a, Werner and Smith, 1992, Wolin and Wolin, 1993). Such positive emotions have been linked with increased life satisfaction and psychological wellbeing (Chang et al., 1997, Tugade and Frederickson, 2004, Tugade et al., 2004, Goldman et al., 1996). Southwick and colleagues (2005a) found that positive emotions can increase tolerance to stress and reduce the associated effects. Haglund and colleagues (2009) found third-year medical students use humour to minimise the impact of stress and improve their mood. Similarly Manne and colleagues (2003) conducted a study around the psychological state of mothers whose children are

undergoing bone marrow transplantation concluding that humour greatly increased the psychological health of the mother.

Cognitive flexibility is the ability to adapt cognitive processing strategies to face unexpected situations (Cañas et al., 2003). It includes: (1) explanatory style; (2) cognitive reappraisal; and (3) acceptance (Southwick et al., 2005a). Explanatory style is the habitual way individuals explain why they experience a particular event (Peterson et al., 1988, Seligman et al., 1988). Resilient individuals are said to have an explanatory style that enables them to ‘persevere, embrace challenges, and grow from failure’ (Southwick et al., 2005a, p. 270). Resilient individuals perceive problems differently; they do not place unwarranted blame on themselves and are less likely to become overwhelmed as they perceive tasks as solvable. Cognitive reappraisal is the ability to modify thinking about potentially significant situations (Ray et al., 2005). It enables resilient individuals to ‘reappraise, reframe or find positive meaning in an adverse event’ (Southwick et al., 2005a, p. 270). Acceptance allows individuals to tolerate highly stressful situations (Southwick et al., 2005a); this in turn helps to lower the psychological impact of those situations (Siebert, 1996, Manne et al., 2003, Silver et al., 2002).

Spirituality considers the influence of religious and spiritual beliefs on perceptions of stressful events. According to Southwick and colleagues ‘religion and spirituality may have protective effects on physical and emotional wellbeing’ (2005a, p. 272) and can even enhance recovery following medical illness (McCullough et al., 2000). Studies demonstrate negative correlations between religiousness and depression (Braam et al., 2001, Koenig et al., 1998), ill health (Koenig et al., 2004), and suicide (Donahue and Benson, 1995a, Donahue and Benson, 1995b). This factor incorporates the beneficial impacts that religious beliefs on the individual’s perception of potential stressors.

Social support refers to the beneficial influence of social interactions on perceptions of stressful situations Resick (2001) revealed strong relationships between good social support networks and positive physical and psychological health. Social support therefore appears to buffer against the effects of stress on mental and physical health (Southwick et al., 2005a). Social networks can also help to: regulate behaviour (Rozanski et al., 1999), which can be fostered as an effective coping strategy (Holahan et al., 1995); reduce loneliness (Bisschop et al., 2004); and

increase self-efficacy (Hays et al., 2001), all of which help to decrease perceptions of stressful life events.

Finally, an active coping style involves the self-implementation of strategies or initiatives to avoid the effects of job-related stress (Parkes, 1990, Parkes, 1994, Goodkin et al., 1992). It involves attempts 'to come to grips with problems at work by cognitively analysing the situation and/or by concrete action to solve or overcome the problem' (Rijk et al., 1998, p. 5). Southwick and colleagues (2005a) simplified this further by defining active coping to include seeking social support, positively reframing stressors, and adopting a fighting spirit. Resilient individuals often implement active coping mechanisms (Moos and Schaefer, 1993, Maddi, 1999), which in turn lessens the psychological and physical effects of stress (Valentier et al., 1994, Holahan et al., 1995, Werner and Smith, 1992).

Resilience can be boosted by attending to each of the aforesaid five components (Haglund et al., 2009, Southwick et al., 2005b). By fostering positive emotion, cognitive flexibility, meaning, social support, and/or an active coping style, individuals are better able to modify their perceptions of potentially stressful situations and manage it accordingly.

Resilience is proposed to be a minimising influence on WFC and burnout, therefore indirectly influencing levels of intention to quit the profession. Resilience has been theorised to reduce WFC (Nywaledzigbor, 2013) and burnout (Glasberg et al., 2007, García and Calvo, 2012, Taku, 2014). Nywaledzigbor (2013) researched the influence that resilience and social support has on WFC amongst Ghanaian women. Nywaledzigbor proposed that the combination of resilience and social support resulted in reduced WFC, however this was not the case. Instead Nywaledzigbor concluded that resilience and social support might each have their own individual influence on WFC.

Resilience is also associated with lower levels of burnout. Garcia and Calvo (2012) investigated the influence of resilience on burnout amongst Spanish nursing staff. As a result resilience was negatively associated with burnout, indicating the minimising influence that resilience can impose on potential burnout levels. Taku (2014) conducted a similar study amongst physicians, generating similar findings to Garcia and Calvo (2012). Through the use of the Maslach Burnout Inventory, Taku

(2014) illustrated that resilience decreased all components of burnout. These findings extend to general practice.

2.7.1 Resilience in General Practice

In the medical field, studies show resilient individuals experience better psychological and physical outcomes when faced with the stress of clinical practice or clinical training (Haglund et al., 2009, Kjeldstadli et al., 2006, Tugade and Frederickson, 2004, Tugade et al., 2004). This is largely because resilience can lessen the impact of the work-related stressors that physicians are exposed to.

Many studies on physician resilience involve medical students, primarily due to ease of access. Kjeldstadli and others (2006) found resilience helped to reduce the ill effects of stress on mental health. Haglund and colleagues (2009) expanded on these findings articulating that despite the variety of experiences and situations that the students were exposed to, as their levels of resilience increased throughout their training there was a corresponding decrease in the reported impact of those stressors.

Within Australia, Cooke and colleagues (2013) investigated resilience levels among GP registrars, finding that low levels of resilience increased effects of demands inflicting additional physical and psychological tolls. This progression increased the possibility of susceptible to secondary traumatic stress, anxiety and reduced compassion towards patients. Less resilient GP registrars experienced greater negative ramifications than resilient GP registrars, suggesting low levels of resilience being linked to high levels of burnout.

Based on the beneficial beliefs of resilience, some theorists have called for further investigations into the articulation of physician resilience levels (Van De Camp et al., 2006), however few studies provide adequate theoretical backing for the inclusion of resilience-building initiatives in the training of physicians, particularly GPs. This study proposes that resilience will have a beneficial influence in not only the reduction of GP stress, but also levels of an intention to quit the profession.

2.8 Intention to Quit

Intention to quit can be best understood as a 'conscious and deliberate wilfulness to leave the organisation' or profession (Tett and Meyer, 1993, 262). As intentions are the most identifiable immediate determinant of behaviour (Ajzen and Fishbein, 1980,

Igbaria and Greenhaus, 1992), the only way to determine future turnover is by investigating intention (Firth et al., 2004). Determining the cause of an individual's decision to leave the organisation or profession after the action is taken is far less feasible. Research has shown that individuals seek to cease employment when they feel overwhelmed, experience extreme job stress, have low job satisfaction, or feel undervalued (Tett and Meyer, 1993, Dyrbye et al., 2010b). An increase in any component will lead to an increase in intentions to quit, a causation that is multiplied should the individual experience a rise in all three sub-categories.

Intention to quit was formally tested in Sager's (1991) longitudinal study involving car salesmen, which demonstrated that the concept clearly differentiates leavers from stayers within the organisation. Voluntary turnover is extremely costly to an organisation in terms of both 'replacement costs and work disruption' (Hellman, 1997, p. 677) – this extends to health services (Young and Leese, 1999). By measuring intention to quit, it is therefore possible to intervene before the participant leaves the organisation or profession.

2.8.1 Intention to Quit and General Practice

Due to high workload, patient demands, and other practice-related stressors, an intention to quit the profession of general practice is high (Brett et al., 2009, Britt et al., 2009, Britt et al., 2011). This contributes to actual turnover (Forrest et al., 2010, Rachootin, 2010). With insufficient GP recruitment (Joyce et al., 2006, Arnold, 2010), the ageing of GPs (Heath Workforce Australia, 2012, Schofield and Beard, 2005), the ageing population and therefore increasing demand for their services (Australian Bureau of Statistics, 2011, Charles et al., 2004, Lutz et al., 2008, Librerl and O'Reilly, 2008), the levels of burnout and an intention to quit is likely to rise.

Prybil (1971) found many physicians choose to leave their profession due to inadequate financial rewards (48.1 %). At the time it was believed that physicians were content with high work demands provided they received adequate financial remuneration. Additionally limited control over workload and poor patient-physician relationships were also associated with increased intentions to quit. Although changes have occurred since then, GPs are not as well remunerated as other medical professionals (Scott and Hall, 1995, Ajzen and Fishbein, 1980).

Since Prybil (1971) conditions surrounding general practice have changed, warranting further investigation. Sibbald and colleagues (2003) investigated the retirement intentions among GPs in England, through contrasting datasets from 1998 and 2001, to show the trends within general practice. Intention to quit general practice rose from 14% in 1998 to 22% in 2001, due to a decreased job satisfaction (Sibbald et al., 2003). Additionally Sibbald and colleagues (2003) found that the increasing levels of workload and the strains these demands place on the GP's non-work life are the main reasons for this degradation in job satisfaction. These findings are congruent with past studies (Sibbald et al., 2000, Health Policy and Economic Research Unit, 2000).

Simoens and colleagues (2002) discovered that around a third of GPs have intentions to reduce their consultation hours within the next five years. According to Simoens and colleagues, 11% of GP principals and 38% of non-principal GPs believed they would leave their current practice within two years. GP principals are more likely to leave general practice altogether due their composition of practice and management related demands. Such studies may lead to the belief that the way to increase the numbers of GPs is to encourage part-time positions; however this will lead to a decrease in the overall number of patients able to be seen by GPs, thus intensifying the workload of those remaining GPs (Schofield and Beard, 2005).

Insufficient recruitment of GPs is a significant problem (Joyce et al., 2006, Arnold, 2010). Farrell and colleagues (2000) articulated that the GP recruitment shortage is due to the difficulty in recruiting students into general practice in some geographical areas and the rising awareness about the demands of general practice (Medical Workforce Standing Advisory Committee, 1997, UK Medical Careers Research Group, 1997). Sivey and colleagues (2010) proposed an increase in remuneration could lead to a greater uptake of general practice. Relative to other specialties, general practice is not as well remunerated. Decreasing this pay difference is anticipated to lead more students to consider general practice.

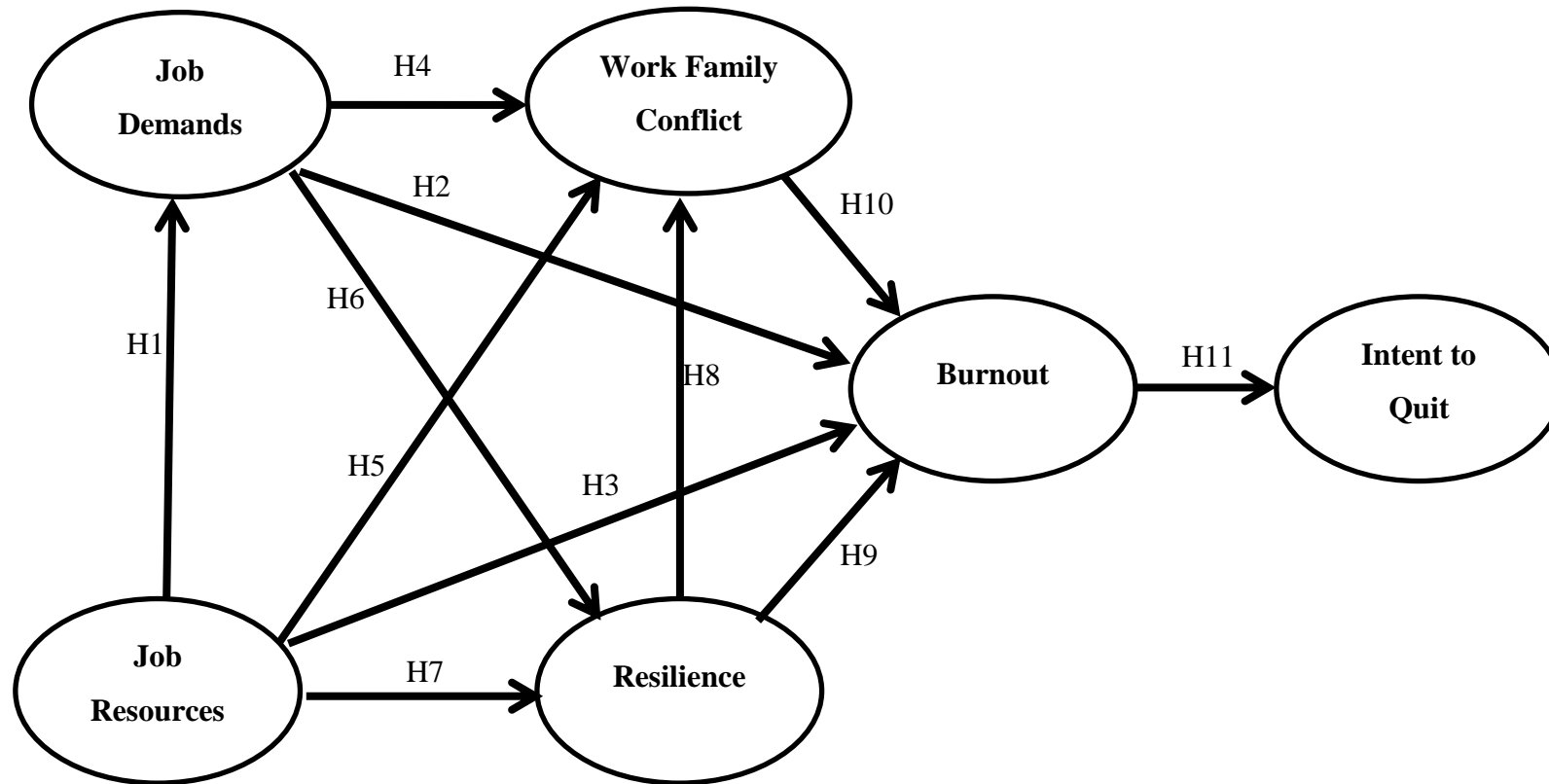
Given the increasing importance of community-based healthcare (Honey and North, 2009), and the ageing population in many Western nations (Lutz et al., 2008), this constitutes a significant problem. Following an overview of the key concepts in this study, the next section proposes theoretical and practical relationships between these.

Testing these relationships will help to identify the individual attributes that are related to stress, and ultimately intentions to quit the profession.

2.9 Proposed Model

This study proposes a model to understand the influence of resilience on the relationship between job demands and burnout. The model extends Akhtar and Lee's (2010) IJSM to include WFC, resilience, burnout, and intention to quit (shown in Figure 2.5). Minimal levels of burnout are expected to be related to reduced levels of intention to quit. It therefore follows that maximising GP resilience will help to bolster retention and recruitment rates.

Figure 2.5: Proposed Model



H=Hypothesis

According to the IJSM (Akhtar and Lee, 2010), the work environment is composed of many job demands and job resources which can have implications for the psychological and physical wellbeing of an individual. Job demands refer to aspects of the job and its environment that require sustained psychological and/or physical effort or skill and therefore impose some toll on an individual (Bakker and Demerouti, 2007). Among GPs, common job demands include increasing workloads, patient demands, increasing government regulations, dealing with complex patient conditions and incompatible demands of work and family domains (Schattner and Coman, 1998, Eley et al., 2007, Sibbald et al., 2000, Keeton et al., 2007, Van Den Hombergh et al., 2009).

Job resources are aspects of the work environment that aid the achievement of work-related goals, reduce the significance and impact of job demands, and provide avenues for learning, development and personal growth (Bakker and Demerouti, 2007). Job resources have been shown to diminish the physiological and psychological costs of job demands, while bolstering personal growth (Schaufeli and Bakker, 2004, Bakker et al., 2005). Within general practice, examples of job resources are appropriate training/educational initiatives, flexible working conditions, supervisory/managerial support, and other practice-related support (Britt et al., 2011). The availability of job resources decrease the frequency of the reporting, and significance of job demands (Bakker and Demerouti, 2007). Research suggests that job resources reduce the physical and psychological costs of work, stimulate personal development, and bolster equanimity, perseverance and self-reliance (Bakker and Demerouti, 2007, Demerouti et al., 2001a, Akhtar and Lee, 2010, Carver and Scheier, 1992, Eley et al., 2007). Within general practice, as GPs feel more supported through the increased availability of job resources, they will experience fewer job demands.

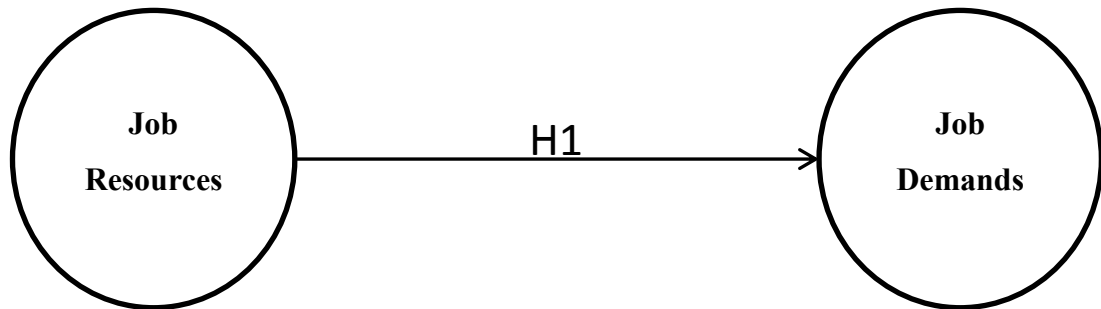
Calnan and colleagues (2000) investigated the stressors of general practice by surveying GPs, practice managers and other practice staff. Calnan and colleagues found the role of a GP to be the most stressful within general practice. Additionally GPs with higher levels of job resources reported lower levels of job demands, suggesting that job resources are negatively associated with job demands. Shirom and colleagues (2006) used CoR theory to understand the interactions of job

resources within general practice. Shirom and colleagues found that through increased availability of resources, physicians experienced fewer job demands.

Informed by previous studies (Calnan et al., 2000, Shirom et al., 2006), job resources are expected to be negatively associated with job demands.

Hypothesis 1: Job resources are negatively related to job demands.

Figure 2.6: Hypothesis 1



Burnout refers to the process of the ‘gradual depletion of the individuals intrinsic energetic resources, leading to feelings of emotional exhaustion, physical fatigue and cognitive weariness (Shirom and Melamed, 2005, p. 599). Bakker and colleagues (2005) suggest that the stress formed by extreme job demands depletes the individual of their energy, thus heightening feelings of exhaustion and burnout.

Schaufeli and Bakker (2004) investigated the formation and implications of burnout for professionals ($n=1698$). Schaufeli and Bakker found that burnout was exacerbated by excessive job demands. In particular job demands were shown to be a strong contributor to feelings of emotional exhaustion, a prime component of burnout. Bakker and colleagues (2005) investigated the formation of burnout within the field of education. They found that emotional job demands can lead to emotional exhaustion, cynicism and low levels of professional efficacy, thus resulting in burnout.

According to Van Dierendonck and colleagues (1994) the primary cause of burnout among GPs is the demanding nature of the professional-recipient relationship, a view supported by others (Freudenberger, 1974, Maslach, 1978, Cooper et al., 1989). The demands GPs are exposed to include excessive workloads (Revicki and May, 1983, Zantinge et al., 2009), interference with family life (Keeton et al., 2007) and the increasing drain of administration/bureaucracy (Eley et al., 2007). These demands impact on GP wellbeing (Cooper et al., 1989) and levels of exhaustion.

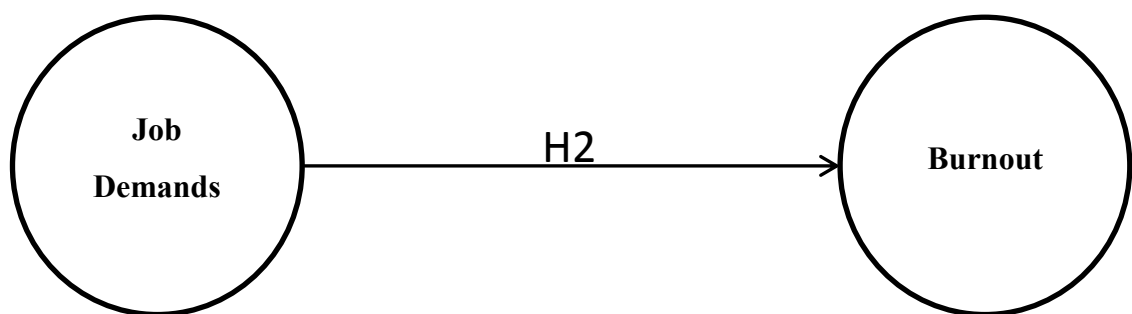
LeBlanc and colleagues (2001) investigated burnout among clinicians providing a form of oncology care ($n=816$), a key proportion of which were GPs ($n=179$). Job demands were shown to entice burnout, particularly through the components of emotional exhaustion and depersonalisation. Surprisingly job demands had a higher impact on these factors than patient deaths.

In a study of French GPs ($n=306$) Cathébras et al. (2004) uncovered a relationship between job demands, particularly workload and administrative matters, and burnout. Enhanced by the burnout experienced, 50% of surveyed GPs considered retraining to a different medical field. Alarming 5.5% of GPs admitted to excessive alcohol consumption, 30% had taken some form of psychotropic drug with 13% having considered suicide, citing job demands as a major contributor to these behaviours.

Research suggests that persistent exposure to severe levels of job demands can lead to burnout (Cathébras et al., 2004, LeBlanc et al., 2001). Within the setting of general practice continual exposure to such demands can impose great psychological and physical tolls on the GP. If not addressed overtime these demands will exacerbate burnout. Therefore it is expected that job demands will be positively related to GP burnout.

Hypothesis 2: Job demands are positively related to burnout.

Figure 2.7: Hypothesis 2



Job resources lessen the potential impact of workplace stressors on the individual (Bakker et al., 2005, Schaufeli et al., 2009, Xanthopoulou et al., 2007, Hakanen et al., 2008). In a Dutch study ($n=747$), Xanthopoulou and colleagues (2007) found that increased presence and perceived value of job resources decreased burnout by reducing emotional demands. Other studies have linked the availability of job resources to increased work engagement, which is significant as work engagement

averts disengagement, a primary component of burnout (Hakanen et al., 2008, Schaufeli et al., 2009).

Freeborn (2001) investigated the predictors of physician burnout within health management organisations ($n=608$). Freeborn (2001) concluded that increased control over work and increased collegial support minimised the existence of burnout. Job control was the greatest deterrent of burnout suggesting that when the physicians felt in control of their work situation, they were able to withstand higher levels of demands. LeBlanc and colleagues (2001) found similar results within their study of physicians, which included GPs where job control was shown to minimise the existence of emotional exhaustion, depersonalisation and increase physician satisfaction.

Hakanen and colleagues (2008) gained further insight into the effects of an imbalance between job demands and job resources upon the motivation and general health of dentists ($n=2555$). Through the increased job resources, dentists felt valued and experienced associated feelings of belongingness, professional competence, and increased work engagement. In this context, work engagement was defined as a 'positive, fulfilling, work-related state of mind that is categorised by vigour, dedication, and absorption' (Hakanen et al., 2008, p. 225).

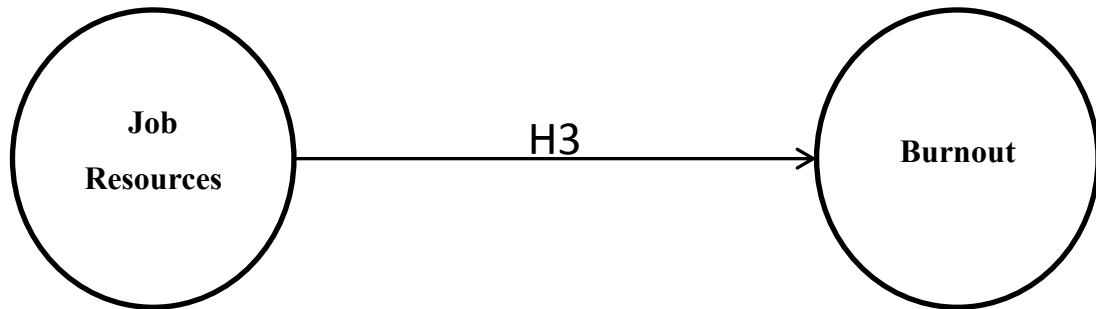
Schaufeli and colleagues (2009) found job resources diminish the potential impact of the physical job demands. Job resources included social support, autonomy, educational and personal development opportunities, and feedback about work performance. By ensuring the availability of resources, the effects of the job demands were diminished. This averted burnout by increasing work engagement and wellbeing (Schaufeli et al., 2009).

Burnout can occur from an imbalance between job demands and job resources where a 'lack of job resources can evoke a withdrawal process, because it undermines employee motivation and learning' (Bakker et al., 2005, p. 176). Schaufeli and colleagues (2009) found that a perceived increase of job resources was associated with individuals experiencing lesser discomfort from their job demands. As prolonged exposure to excessive job demands is proposed associated with burnout, the minimisation of the significance of the impacts of these demands would therefore

lead to lower levels of burnout (Cathébras et al., 2004). Informed by research, job resources are expected to be negatively associated with burnout.

Hypothesis 3: Job resources are negatively associated to burnout.

Figure 2.8: Hypothesis 3



Past research has shown that GPs are highly susceptible to WFC (Swanson et al., 1998), due to the demands of their role (Nielsen and Tulinius, 2009). Total separation of the work and family life is seemingly incompatible with reality (Voydanoff, 2004), therefore as both domains fight for the finite resources of a GP there is the potential for WFC to occur (Ozbilgin et al., 2011, Montgomery et al., 2006b).

As job demands increase, the work domain will demand more time and cognitive effort from the GP. At the same time, recent shifts in traditional gender roles and the rise of dual-income families creates new challenges on the home-front (Raley et al., 2006, Berridge et al., 2009). With an increase in demands from either domain there is the potential for WFC. Such conflict can be problematic for both personal and work life. Previous research links WFC with reduced work performance (Butler and Skattebo, 2004), marital and family problems (Demerouti et al., 2001c), as well as increased absenteeism and turnover (Chandola et al., 2004).

Butler and colleagues (2005) conducted a study using Karasek's JD-C model (1979) to predict the formation of WFC. An increase in job demands was positively related to WFC. It was suggested that as the work environment becomes more demanding, the individual is left with less time and resources to devote to family life, thus resulting in WFC.

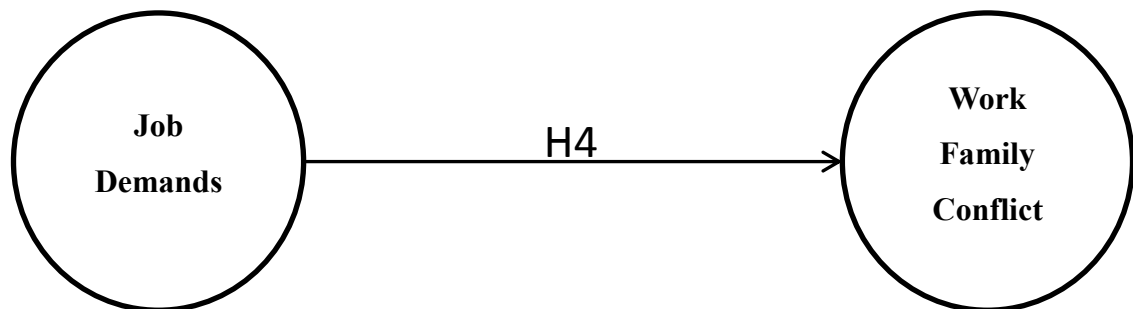
Internationally, past studies have found that the increased demands of general practice can result in WFC (Rout, 1996, Swanson et al., 1998). Rout (1996) investigated the WFC of GPs through surveying both the practitioner and their

spouse. Rout found that as the demands of general practice increased, the GP had less time to fulfil the expectations of the family domain resulting in WFC. Additionally as WFC increases, there is the potential for communication problems to occur between the GP and their spouse intensifying marital problems and/or further exacerbating GP stress. Swanson and colleagues (1998) performed a study with similar aims to Rout (1996), confirming the existence and significance of WFC for GPs.

Within Australia, Walker and Pirotta (2007) identified that WFC was a major problem for many GPs. As the demands of general practice intensify, there is the increased chance of WFC occurring. Similarly, within the current study, job demands are expected to be positively associated with WFC.

Hypothesis 4: Job demands are positively related to WFC.

Figure 2.9: Hypothesis 4



Job resources are ‘structural or psychological assets that may be used to facilitate performance, reduce demands or generate additional resources’ (Voydanoff, 2004, p. 398-399). Through decreasing the demands of the work environment, job resources can reduce WFC. Voydanoff (2004) investigated the influence of job resources on work-family facilitation. According to Voydanoff (2004, p. 399) work-family facilitation refers to a form of synergy occurs between the two domains in which ‘resources associated with one role enhance or make easier participation in the other role’.

Voydanoff (2004) tested this theory on 1,938 American workers and their families. Both the workers and their partners were surveyed to allow a more holistic understanding of the situation. Voydanoff found that through increased availability of organisational support and time-based family support levels of WFC could be minimised.

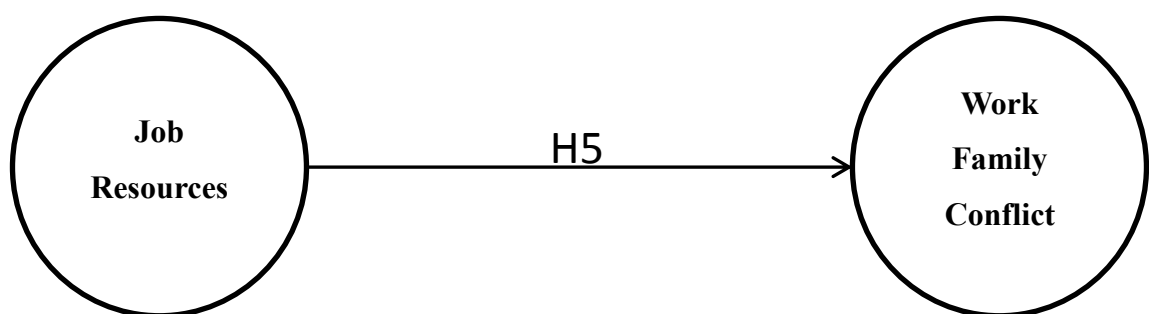
Through investigating the causes and deterrents of WFC, Butler and colleagues (2005) identified that job control can not only reduce WFC, but achieve work-family facilitation. Work family facilitation is defined as the extent ‘to which participation in one life role is made easier through participation in another’ (Butler et al., 2005, p. 155-156). Through job control individuals were able to successfully accommodate the demands of work and family, thus eliminating WFC. Grönlund (2007) reaffirmed the works of Butler and colleagues (2005), through illustrating the benefits of job control on WFC. In particular this trend was more evident within the female study population primarily due to their priorities in the allocation of resources between the work and home environments.

Demerouti and colleagues (2011) further investigated the effect that job resources had on the formation and intensity of WFC. Demerouti and colleagues found that numerous job resources, not just job control, minimised WFC. These included participation in decision making, development opportunities and collegial support.

As job resources aid in lessening the effects of job demands (Bakker et al., 2005) it is therefore anticipated that this would lead to a decrease in the demands of the work domain thus making WLB more achievable. By lessening the effects of job demands, job resources will be negatively associated with WFC.

Hypothesis 5: Job resources are negatively related to WFC.

Figure 2.10: Hypothesis 5



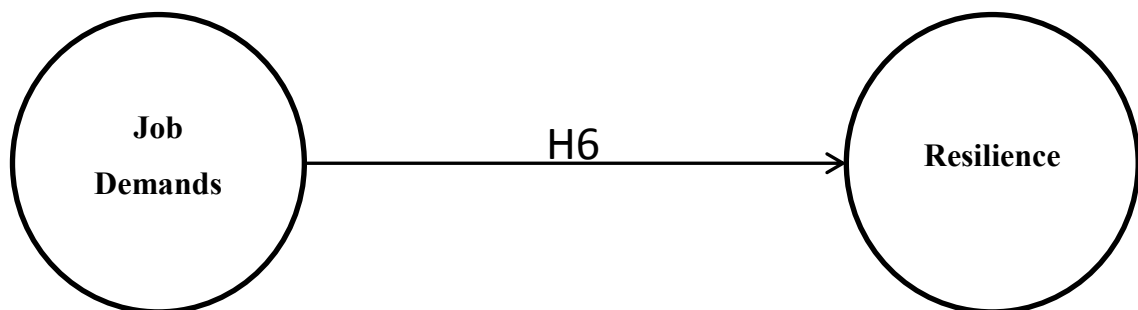
Incessant work-stress can effect personal wellbeing (Bakker and Demerouti, 2007) – and this is no different in general practice. Persistent exposure to job demands are likely to erode the psychological qualities that contribute to resilience – these include equanimity, perseverance, and self-reliance (Beardslee, 1989, Caplan, 1990, Wagnild and Young, 1993a). Li and colleagues (2005) found a relationship between increased job demands and a decreased equanimity, revealing that job demands decreased the

participants ability to work. This reduction in work ability further decreased equanimity (Li et al., 2005) – and, within medical practice, this is associated with a reduced ability to cope (Dyrbye et al., 2010a, Dyrbye et al., 2010b, Dunn et al., 2008). For instance, in their study of medical students, Dunn and colleagues (2008) found that increased demands from both work and training led to a corresponding decrease in the levels of perseverance and ability to cope. Overtime the demands imposed upon the students eroded their coping ‘reservoirs’ which were considered to be the key for their resilient nature.

According to Wagnild and Young, (1993a, p. 166) resilience refers to an ‘emotional stamina’ that enables an individual to adapt to the ever-changing situations they are exposed to. As job demands increase, they erode the key components of resilience being equanimity, perseverance, and self-reliance (Beardslee, 1989, Caplan, 1990, Wagnild and Young, 1993a). As such job demands are hypothesised to be associated with lower levels of resilience.

Hypothesis 6: Job demands are negatively associated with resilience.

Figure 2.11: Hypothesis 6



Resilience is a ‘combination of abilities and characteristics that interact dynamically to allow an individual to bounce back, cope successfully, and function above the norm in spite of significant stress or adversity’ (Tusaie and Dyer, 2004, p. 3). As job resources aid in the minimisation of work related stress, it is anticipated that an increase in the availability of job resources will bolster resilience levels.

Jensen and colleagues (2008) investigated the formation of resilience for Canadian GPs. Through a series of interviews a common theme was discovered indicating that such resources as supervisory and collegial support are vital in promoting resilience. Previous research also suggests support is a key contributor to avoiding post-traumatic stress thus making the individual more resilient (Ozbay et al., 2008,

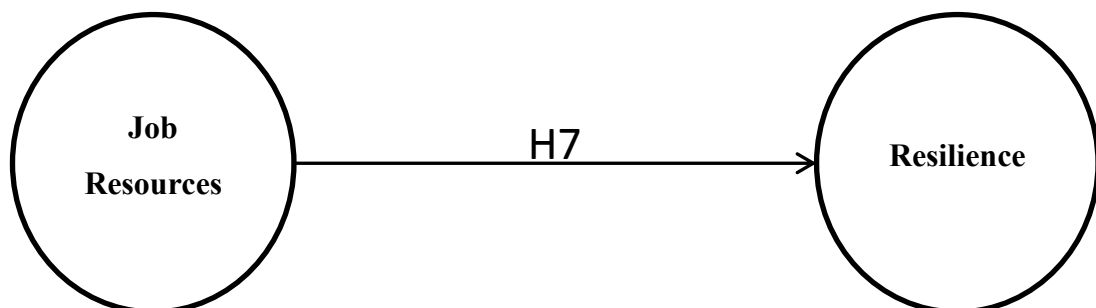
Southwick et al., 1999). Through the availability of collegial and social support these individuals were able to adapt to or withstand severe stressors with minimal impact on their wellbeing.

While studying geriatric patients, Travis and others (2004) uncovered a link between social support and self-efficacy. It was found that individuals with greater levels of support were able to maintain higher levels of self-efficacy despite their illness. It was proposed that the level of support influenced the patients' appraisal of threat, resulting in the individual being able to better cope with their condition. In a similar fashion it is expected that support offered to GPs will enable a more favourable perception of the significance of the demands they encounter.

Job resources are expected to bolster the three main components of resilience, being equanimity, perseverance and self-reliance (Wagnild and Young, 1993a, Wagnild, 2009). Based on this understanding, it is anticipated that job resources will be positively related to resilience.

Hypothesis 7: Job resources are positively related to resilience.

Figure 2.12: Hypothesis 7



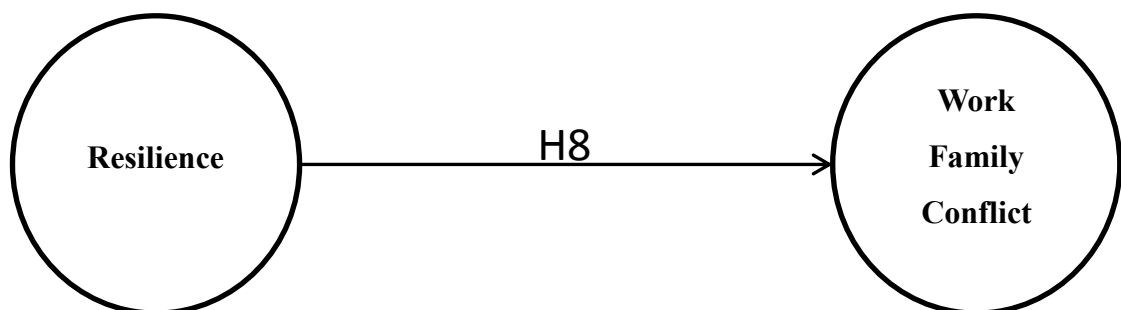
Resilience can decrease the psychological and physical implications of job demands (Werner and Smith, 1992, Wolin and Wolin, 1993, Tugade and Frederickson, 2004, Tugade et al., 2004, Haglund et al., 2009). Resilient individuals are typically those with a zestful outlook and, by using humour and positive thinking, seemingly avoid the effects of stress (Cooke et al., 2013). As these characteristics extend beyond the work environment (Carrothers et al., 2000), the benefits and buffering effects are likely to continue beyond the work context. WFC refers to the conflict that occurs as a result of the competing for the shared scarce resource of attention. It is anticipated that GPs will be able to use resilience to avert WFC.

Nywaledzigbor (2013) investigated the minimising influence that resilience and social support can have on the formation and significance of WFC. According to Nywaledzigbor's (2013) original logic, she believed that both social support and resilience had to co-exist in order to influence levels of WFC. Although this logic was not supported, Nywaledzigbor elaborated stating that both factors, resilience and social support, could individually influence levels of WFC. This is a notion further strengthened by McDermoth (2010) in her research on family issues resulting in hospitalisations.

Cooke and colleagues (2013) identified that resilience can lessen the stress caused by the GP registrars practice and training. As the work-related stressors decrease, the intensity of the competition for the resources of the GP will subside. This process allows more resources to accommodate family expectations and demands, potentially enabling WLB. By minimising the psychological costs of the both work and family life, it is anticipated that resilience is likely to be associated with lower levels of WFC.

Hypothesis 8: Resilience is negatively associated with WFC.

Figure 2.13: Hypothesis 8



Resilient individuals 'cultivate positive emotions' (Tugade et al., 2004, p. 1167), which can lessen the psychological and physical consequences of stress. As such, clinicians with higher levels of resilience experience fewer ill-effects from the stress of medical training or practice (Haglund et al., 2009, Kjeldstadli et al., 2006, Tugade et al., 2004, Cooke et al., 2013).

In investigating the formation of burnout among carers of the elderly Menzies and colleagues (2006) found resilient caregivers were less emotionally exhausted with greater levels of personal accomplishment than non-resilient caregivers. Through the

use of numerous strategies and practices, these individuals were able to avoid the potential occurrence of burnout.

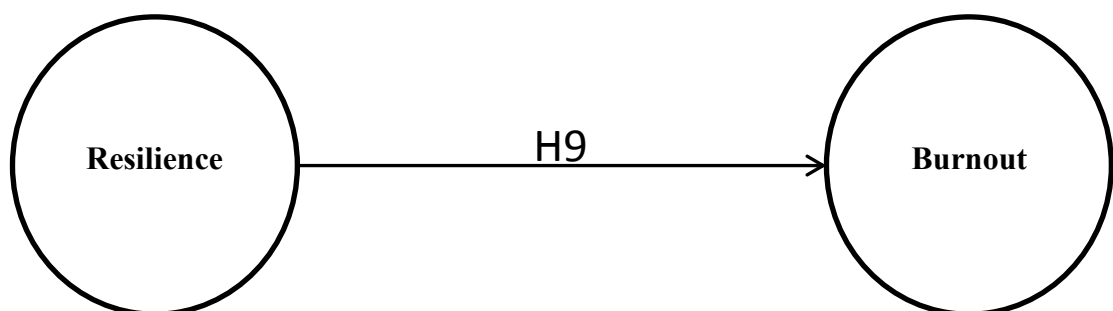
Glasberg and colleagues (2007) sort to determine the factors that prevent burnout among Swedish healthcare personnel. Glasberg and colleagues found that resilience was positively associated with all three primary components of burnout. Resilient individuals experienced lower levels of emotional exhaustion and depersonalisation due to their extensive coping and adapting mechanisms (Glasberg et al., 2007). Resilient individuals appeared to be able to draw more satisfaction out of their work reporting higher levels of personal accomplishment.

Garcia and Calvo (2012) conducted a study on the beneficial influence that resilience has for burnout, specifically amongst Spanish nursing staff. Resilience was found to be negatively associated with levels of burnout, representing their original hypothesis. More recently Taku (2014) studied the impacts that a range of personal factors, including resilience, have for burnout experienced by physicians. Similarly to the works of Garcia and Calvo (2012), Taku (2014) also found resilience to be associated with lower levels of burnout.

As resilience decreases the potential ramifications of workplace stress (Glasberg et al., 2007, Menezes et al., 2006), associated levels of burnout are expected to decrease. Based on this understanding, it is expected that resilience will be associated with lower occurrences or significance of burnout.

Hypothesis 9: Resilience is negatively associated with burnout.

Figure 2.14: Hypothesis 9



WFC can be a significant source of stress, the antecedents of which dwell in both the work and family domains (Boyar et al., 2003). Thanacoody and colleagues (2009) examined the effects of WFC on cancer workers ($n=114$). As a result of the intense nature of their work, the physicians experienced great physical and psychological

demands. Thanacoody and colleagues found significant links between WFC, job stress, and burnout. The stress generated and intensified by WFC resulted in extreme exhaustion and depersonalisation, thus increasing physician burnout.

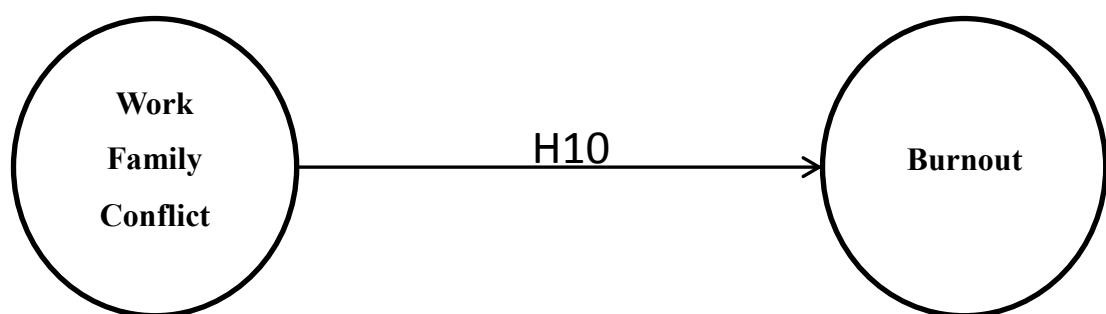
Chaoping and colleagues (2003) investigated the formation of burnout as a result of WFC among Chinese doctors and nurses. Chaoping and colleagues found WFC to exacerbate all three primary components of burnout, particularly emotional exhaustion. The WFC experienced by the participants intensified the impact of work and family stressors, thus increasing the formation of burnout. A study on Greek GPs undertaken by Montgomery and colleagues (2006a) also found that WFC intensified the stress of the physician, leaving the physician susceptible to burnout.

Within psychologists, Rupert and colleagues (Rupert et al., 2009) investigated the impact of WFC on the physician. As a result of their study, WFC was identified as being significantly related to burnout. More recently Wang and colleagues (2012) investigated the impact that WFC can have on nursing staff. As a result of their reasonable large study (n=1332) it was found that WFC was of great influence to levels of burnout.

Swanson and colleagues (1998) showed that within general practice, increased work-related stressors caused tension in the home for both male and female GPs. As such, GPs are likely to feel the effects of WFC at both home and work. Previous studies illustrated links between GP-stress and many physical and psychological ailments, all of which invoke further exhaustion upon the GP (Burke, 1988, Peter and Siegrist, 2000, Buddeberg-Fischer et al., 2008). It is expected that an increase in WFC will lead to a corresponding intensification in levels of burnout experienced.

Hypothesis 10: WFC is positively related to burnout.

Figure 2.15: Hypothesis 10



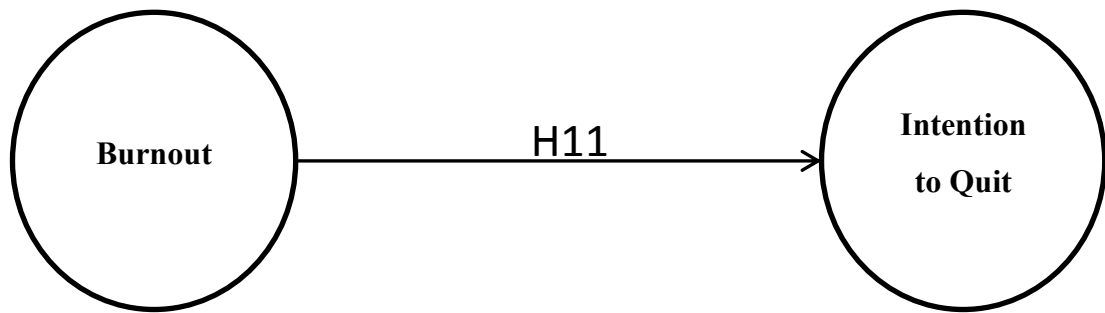
Burnout has typically been associated with numerous forms of job withdrawal, including ‘absenteeism, intention to leave the job and actual turnover’ (Maslach et al., 2001, p. 406). Individuals seek to cease employment when they feel overwhelmed, experience extreme amounts of job stress, have low job satisfaction, or feel undervalued (Tett and Meyer, 1993, Dyrbye et al., 2010b). Burnout has been shown to influence intention to quit through two of its three components – emotional exhaustion and personal accomplishment (Borritz et al., 2006); as both deplete the emotional capacity to cope with the demands of general practice.

Weisberg and Sagie (1999) investigated the links between exhaustion and intention to quit among teachers. Weisberg and Sagie found that an intention to quit was influenced by mental and physical exhaustion. These findings were mirrored in the medical context through a study undertaken on mental health workers. Acker (2012) found that emotional exhaustion was the primary predictor of intention to quit. Schaufeli and Bakker (2004) investigated the links between burnout and an intention to quit among wider professionals. Similarly to previous studies, once again all three components of burnout were strongly related to an intention to quit.

Dyrbye and colleagues (2010b) investigated levels of burnout and an intention to quit medical school. Students who experience emotional exhaustion were five to six times more likely to drop out of medical school. The other components of burnout, while associated with an intention to quit, were not as strong. Individuals experiencing high levels of depersonalisation and low personal accomplishment were only two to three times more likely to drop out compared to the average student.

When individuals experience levels of burnout, they become dissatisfied with their current work arrangements and seek change. In many cases this change results in intention to quit the organisation profession. Within general practice it is anticipated that similar trends will occur. Burnout is therefore likely to result in higher occurrences of intentions to quit through a reduced feeling of self-accomplishment and an intensification of emotional exhaustion.

Hypothesis 11: Burnout is positively associated with intention to quit.

Figure 2.16: Hypothesis 11

2.10 Conclusion

This chapter has provided an overview of the literature which has informed the proposed model. The chapter commenced by providing an insight into the orientations of stress in general, and then more specifically stress within general practice. Following this the models generated to understand the formation and intensity of stress were reviewed, with careful consideration given to the JD-C model (Karasek, 1979), the JD-CS model (Johnson and Hall, 1988b), the JD-Rs model (Demerouti et al., 2001c), the CoR theory (Hobfoll, 1988) and in particular the new IJSM (Akhtar and Lee, 2010).

This chapter then reviewed theoretical developments in the areas of burnout, resilience, WFC and intention to quit with specific consideration given to the practical implications of each area upon the life and wellbeing of the GP. The chapter then concluded by proposing and substantiating a new model to accurately gauge the minimising effect of on the relationship between job demands and burnout, and the implications this may have on the ability of the GP to continue practicing.

Following this chapter, the next chapter presents the methodology of this study. The chapter details the methodological position adopted as well as the methods used to collect and analyse the quantitative and qualitative data. The chapter then concludes with a discussion on the ethical considerations of this study.

Chapter 3: Methodology

3.1 Introduction

Chapter three outlines the research methodology used in this project. The chapter begins with a review of the three considered epistemologies and their associated theoretical perspectives and methods. The chapter also details the practical issues encountered throughout the project primarily in terms of data collection. The fundamental source of the problems flowed from the national health reform (Department of Health and Ageing, 2011a, Department of Health and Human Services, 2012, Department of Health and Ageing, 2012) that have impacted primary care, leading to limitations in research opportunities.

The chapter then outlines the five primary phases of the sequential mixed methods design used, which includes the collection of quantitative data, the analysis of this data, connecting the quantitative and qualitative research phases, qualitative data collection and the integration of the quantitative and qualitative results.

Following this, the reflective measures were refined. This process began with undertaking a confirmatory factor analysis on the reflective constructs as well as including tests for construct validity and reliability to allow for further analysis. The chapter then details the preliminary analysis of the dataset in preparation for hypothesis testing. The checks undertaken included non-response bias, common method variance, missing data analysis as well as a power analysis. Following this, the chapter concludes with a discussion of the ethical considerations that arose throughout the study, including participant confidentiality, repercussions of disclosure of information, the psychological side effects of participation, data security and data integrity.

3.2 Research Paradigm

A paradigm or methodological perspective, refers to a general set of feelings and beliefs, a way of breaking down the complexities of the real world (Patton, 1990). According to Guba and Lincoln (1994, p. 107) the paradigm adopted will define ‘the nature of the world, the individuals place in it, and the range of possible relationships to the world and its parts.’ These beliefs encompass three main levels which include; ontology, epistemology and methodology (Lincoln and Guba, 2000).

Ontology, also referred to as epistemological ontology, is the 'human conceptualisations of reality' (Winter, 2001, p. 587). Ontologies are typically used to categorise and clarify different viewpoints on the nature of reality to allow for knowledge sharing (Creswell and Plano Clark, 2007, Chandrasekaran et al., 1999).

Epistemology refers to 'the branch of philosophy that deals with questions concerning the nature, scope, and sources of knowledge' (DeRose, 2002, p. 1), or how we gain knowledge of what we know (Creswell and Plano Clark, 2007, Gall et al., 1996). The epistemological stance informs the level and type of interaction the researcher will have with the research participants. Crotty (1998) outlines three primary epistemologies being; objectivism, subjectivism and constructionism; each of which is associated with their own theoretical perspectives, methodologies and methods, each of which are discussed below.

Objectivists believe that 'meaning, and therefore meaningful reality exists as such apart from the operation of any consciousness' (Crotty, 1998, p. 8). Reality exists independent of the human consciousness, is purely objective, rests on a strict order, and is governed by stringent unchangeable causal laws that can be realised through experience (Sarantakos, 1993). The common theoretical perspective adopted by objectivists is positivism. Positivism revolves around the principle that human actions are a direct consequence of the situational factors, as opposed to any extensively complex path with its origins in complicated theology or ideology (Durkheim, 1938). As actions are determined by the situations or influences, positivism suggests that findings generated through valid and reliable scientific measures can be generalised to predict the future actions or experiences of individuals exposed to identical situations (Comte, 1830-1842, Lenski, 1991, Miller, 1999, Durkheim, 1938). The methodology typically used in positivist research is described as experimental (Sarantakos, 1993, Guba and Lincoln, 1994). As positivists believe that the human behaviour is prescribed by the situations people find themselves in (Durkheim, 1938, Donaldson, 1997) through observing these situations, researchers are able to associate possible outcomes.

Subjectivists, on the other hand, believe that there is no objective truth, that there are multiple realities that are constructed by individuals (Crotty, 1998). Truth is relative to the physical and cultural surrounds that the people live in as well as their own ontology (Kamil, 2011, Putnam, 1983). Subjective researchers are co-dependent on

the research participants in the pursuit to uncover relative truth. An example of a subjectivist epistemological perspective is postmodernism (Crotty, 1998). Postmodernists do not believe in an absolute truth, rather what individuals view as reality is a social construct formed on the basis of our own individual interpretations of what the world means (Erickson, 2001, McKelvey, 2002). Postmodernists typically adapt qualitative research methods such as narratives and interviews.

The third category, constructionism (Crotty, 1998) revolves around the assumption that 'reality is socially constructed' (Mertens, 2005, p. 12). Constructionism, like subjectivism (Wilson, 2000), rejects the notion of an objective truth, rather than 'truth, or meaning, comes into existence in and out of our engagement with the realities in our world' (Crotty, 1998, p. 8). Meaning is constructed in the mind, in a conglomeration of objectivity and subjectivity (Blumer, 1962). Therefore reality would vary on an individual basis. Individuals, will construct meaning of their reality in their own unique way 'even in relation to the same phenomenon' (Crotty, 1998, p. 9). This feature accounts for the differences in individual's perceptions and interpretations of identical situations or events. A constructionist researcher could use a mixed methods methodology (Harris, 2010), using a combination of qualitative and quantitative methods to gain a greater understanding of the problem situation (Holstein and Gubrium, 2008).

Each differing epistemological paradigm has a unique set of standpoints. This study has used a constructionist epistemology to gain insight into the constructed reality of the participants.

3.2.1 Epistemology

The current study aligned with the constructionist epistemological perspective. The constructionist epistemological perspective was considered the most appropriate for this study due to the fundamental belief that knowledge is generated on an individual level as based on previous experiences, beliefs, prejudices and fears (Crotty, 1998). This is directly opposed to positivism (Blaikie, 1991) that asserts that the world is a conglomeration of 'antecedent variables which operate in a law-like manner to produce these events' (Blaikie, 1991, p. 120). From a positivist perspective reality can be broken down into single events which can be further investigated to draw reasoning from reality or to gain further understanding of the causations of certain

behaviours or situations (Neuman, 2006, Johnson and Onwuegbuzie, 2004). Under this perspective actions or behaviours are not seen as a result of individualistic choices but rather an outcome of various factors. The positivist perspective believes in absolute truths that exist rather than the constructionist view of knowledge being generated by the individual. The selected paradigm shaped the methodology used.

3.3 Methodology

This study was undertaken at a time of great change and uncertainty within general practice nationwide (Department of Health and Ageing, 2011a, Department of Health and Ageing, 2012). Partially due to the highly demanding nature of their positions, GPs are renowned for poor participation rates in research projects (Crouch et al., 2011, Temple-Smith et al., 1998, Aitken et al., 2008, Hocking et al., 2006). This coupled with the uncertainty and change within the sector contributed to poor response rates for the quantitative research tools, leading to several differing data collection methods.

3.3.1 Recruitment Strategy

At the time of commencement, 90-95 % of Australian GPs were members of a Division of General Practice (DGP) (Harris et al., 2003, Australian General Practice Network, 2010). Accordingly the survey (See Appendix 1) was initially distributed through the Divisions of General Practice (DGPs), who were requested to provide participation details to their GP members. The DGPs with a Rural, Remote and Metropolitan Areas (RRMA) classification of 1 were selected to obtain a sample that was geographically similar (Australian institute of Health and Welfare, 2012b). The primary advantage of the approach was to maintain confidentiality. Unfortunately, due to various sector-wide changes affecting the DGPs, the promotion and uptake of the project was lower than expected (n=36). Therefore various contingency plans to increase responses were implemented.

3.3.1.1 Recruitment Issues

Low survey uptake was caused by recent reforms within the Australian primary care sector and the traditionally low rates of GPs to similar projects. In 2008 Aitken and colleagues conducted a web-based research project, of which only 52 of the 600 participants responded. Later in 2011 Crouch and colleagues surveyed 20,000 GPs,

of which only 20 responded. Since then changes within the Australian primary care sector have seen the demise of DGPs and have placed a greater importance on the role of the GP in the wider medical system (Department of Health and Human Services, 2012, Kidd, 2010). GPs are known for particularly poor response rates in research (Crouch et al., 2011). When combined with the changes within primary care, the response rate was lower than anticipated.

3.3.1.1.1 Introduction of Medicare Locals

The national health reform, more specifically changes related to primary care, impacted on recruitment efforts. Previously DGPs provided their members with information regarding new care initiatives, educational training and development opportunities as well as other support initiatives (Department of Health and Ageing, 2010). DGPs also acted as a conduit for research projects, facilitating GP recruitment (General Practice Network Northern Territory, 2012). The distribution of DGPs prior to the changes is presented in Table 3.1.

Table 3.1: Distribution of Divisions of General Practice¹

State	DGPs
New South Wales & Australian Capital Territory	35
Victoria	29
Queensland	18
South Australia	14
Western Australia	13
Tasmania	3
Northern Territory	1

¹ Department of Health and Ageing (2008a, 2008c, 2008f, 2008d, 2008e, 2008g, 2008b)

Under the health reforms most DGPs ceased to exist when their Government funding ended stopped on the 30th June 2012 (Eastern Ranges GP Association, 2012). The role of the DGP was encapsulated by the new Medicare Locals (MLs). MLs were established as part of a plan to minimise the demand for hospital-based services through offering more efficient and effective out of hospital care (Department of Health and Human Services, 2012). More specifically these changes were aimed to increase working relationships between community-based and hospital-based health services. By doing so enabling the tailoring of health care programs to better cater for the local community, improve disease prevention initiatives and to increase the overall quality of health care offered to the public (Department of Health and Ageing, 2009).

Accordingly 62 MLs were established to replace the previous 113 DGPs (Eastern Ranges GP Association, 2012, General Practice Victoria, 2012). To transition from a DGP to a ML, the DGP were required to submit an extensive strategic plan (General Practice Network Northern Territory, 2012) which required considerable staff time. Therefore the efforts made to promote research projects at the time were limited. The current distribution of MLs is as presented in Table 3.2.

Table 3.2: Distribution of Medicare Locals¹

State	DGPs
New South Wales & Australian Capital Territory	19
Victoria	17
Queensland	11
South Australia	5
Western Australia	5
Tasmania	1
Northern Territory	1

¹ NSW Rural Doctors Network (2012), General Practice Queensland (2012), General Practice Victoria (2012), General Practice SA (2011), Department of Health and Ageing (2011b), Department of Health and Human Services (2012), General Practice Network Northern Territory (2012)

Due to conflicting priorities, DGP/MLs were not able to provide their usual level of support to this project; thus GP-recruitment was less than anticipated. As the distribution of information to potential participants was not as anticipated, the number of participants was not sufficient for the current study. Originally it was anticipated that a sample of $n=400$ would be collected, however only 71 responses were collected via this method. The traditionally low participation rates of GPs in research projects have magnified the impact of this factor.

3.3.1.1.2 Response Rates

Poor GP participation is a common problem encountered in general practice research (MacPherson and Bisset, 1995, Kaner et al., 1998, Crouch et al., 2011). Sudman (1985) identified that this trend was caused by GPs being time poor, perceived lack of importance of the research project as well as the fear of confidentiality breaches. Crouch and colleagues (2011) invited 20,000 Australian GPs to participate in an online research project endorsed by the Australian General Practice Network (AGPN) and the Royal Australian College of General Practice (RACGP). Only 20 of the 20,000 GPs (0.001 % Response Rate) completed the survey. The primary reason for the low response rates was considered to be GP time constraints (Crouch et al., 2011). Since the work of Crouch and colleagues, primary care has encountered changes that appear to exacerbate these factors (Britt et al., 2013).

Despite the traditionally low research participation rates of GPs, the original proposed recruitment process was originally perceived to be sufficient. The project was endorsed by and advertised through the relevant DGPs/MLs, as advocated by Harris and colleagues (2003). Originally 10 DGPs within metropolitan Sydney were approached, with a combined membership of 3530 practicing GPs (Primary Health Care Research and Information Service, 2012). The selection of GPs was focused on urban areas to avoid the mixing of rural and urban GPs due to their differing roles and demands (Alexander and Fraser, 2008, Dua, 1997). The study aimed to achieve 400 completed questionnaires from this contingent, requiring a response rate of less than 12%. Partially due to the health reforms, this project did not attract the required responses, therefore contingency plans were implemented.

3.3.1.2 Modified Recruitment Strategies

The contingencies enacted to the recruitment strategy included widening the recruitment area and recruiting from three additional avenues. Each is discussed in turn.

3.3.1.3.1 Widening the Recruitment Area

Originally the location of the potential participants was restricted to 10 DGPs. They included; Bankstown General Practice Division, WentWest Ltd, North Sydney General Practice Network, St George Division of General Practice, Macarthur Division of General Practice, GP Network Northside, Manly Warringah Division of General Practice, Sutherland Division of General Practice, Illawarra Division of General Practice and GP Access. Due to insufficient responses, the recruitment pool was expanded to include the major metropolitan areas of Brisbane, Melbourne and Adelaide. For comparative value, each DGP had to be located within a RRMA classification of 1, as determined by the address of the DGP head office, which denotes urbanness (Australian institute of Health and Welfare, 2012b). Accordingly, additional DGPs were added to the study in conjunction with those previously mentioned (see Table 3.3).

Table 3.3: Additional Divisions of General Practice

State	DGPs
Victoria	Bayside General Practice Network Dandenong Casey General Practice Association Greater Eastern Primary Health Greater Monash GP Network Melbourne East General Practice Network Melbourne General Practice Network Monash Division of General Practice North East Valley Division of General Practice Northern Division of General Practice Peninsula General Practice Network Ltd PivotWest ImpetusTM Southcity GP Services Westgate General Practice Network Ltd
Queensland	Brisbane South Division of General Practice SouthBank Primary HealthCare Network Gold Coast Division of General Practice GPpartners Limited Ipswich and West Moreton Division of General Practice Morton Bay General Practice Network South East Alliance of General Practice
South Australia	GP Partners Adelaide Adelaide Hills Division of General Practice. Adelaide Northern Division of General Practice. Adelaide North East Division of General Practice. General Practice Network South Inc. Healthfirst Network

Given national primary care reforms, these DGPs were in a similar situation to their NSW counterparts. Therefore the project did not attract the anticipated number of participants. Accordingly three additional recruitment methods were pursued, all of which gain access to GPs in differing ways. Each is detailed below.

3.3.1.3.2 University of Western Sydney GP Supervisors

During GP training, medical students are required to undertake on-site training in an accredited practice under the direct supervision of a GP. Through the University of Western Sydney (UWS) School of General Practice, an email invitation was sent to all current UWS GP Supervisors ($n=92$). As only twelve usable responses were obtained (response rate = 13.04%) further recruitment initiatives were required. A possible reason for the lack of response is due to workload. The demands of supervising a medical student, additional to the pre-existing demands of general practice, would leave the GP with little extra time to participate in such research projects.

3.3.1.3.3 Recruitment via General Practice Conference and Exhibition

The project was promoted at the General Practice Conference and Exhibition (GPCE) 2012 to raise the profile of the project among GPs and invite their participation. Unfortunately only 12 responses were obtained; therefore further recruitment measures were necessary.

3.3.1.3.4 Recruitment through Australasian Medical Publishing Company

Additional recruitment was undertaken by an invitation circulated by the Australasian Medical Publishing Company (AMPCo). AMPCo manages a database of medical professionals that can be leased to contact research participants. Initially, AMPCo was requested to contact NSW GPs with a RRMA of 1 ($n=1623$), and provide each participant with a unique Uniform Resource Locator (URL) to access the surveys online. Unfortunately participants were sent a common URL, precluding the opportunities for follow-up. Due to the lack of follow-up only 38 usable responses were obtained (response rate 2.34%).

AMPCo then contacted Victorian GPs within a RRMA of 1 ($n=1360$). Two weeks after distribution 56 participants had accessed the online survey, as identified through the Uniform Resource Locator (URL), and as such did not receive a reminder. A reminder email was sent directly to all participants who had not yet accessed their URL. A total of 82 usable responses (response rate 6.03%) were received.

The contingency plans did not result in sufficient participant numbers and subsequently the methodology needed to be reconsidered. To gain further insight into the lived experiences of GPs, and the ramifications of the hypothesised relationships, it was considered appropriate to transition to a mixed methods research design.

3.4 Revised Methodology

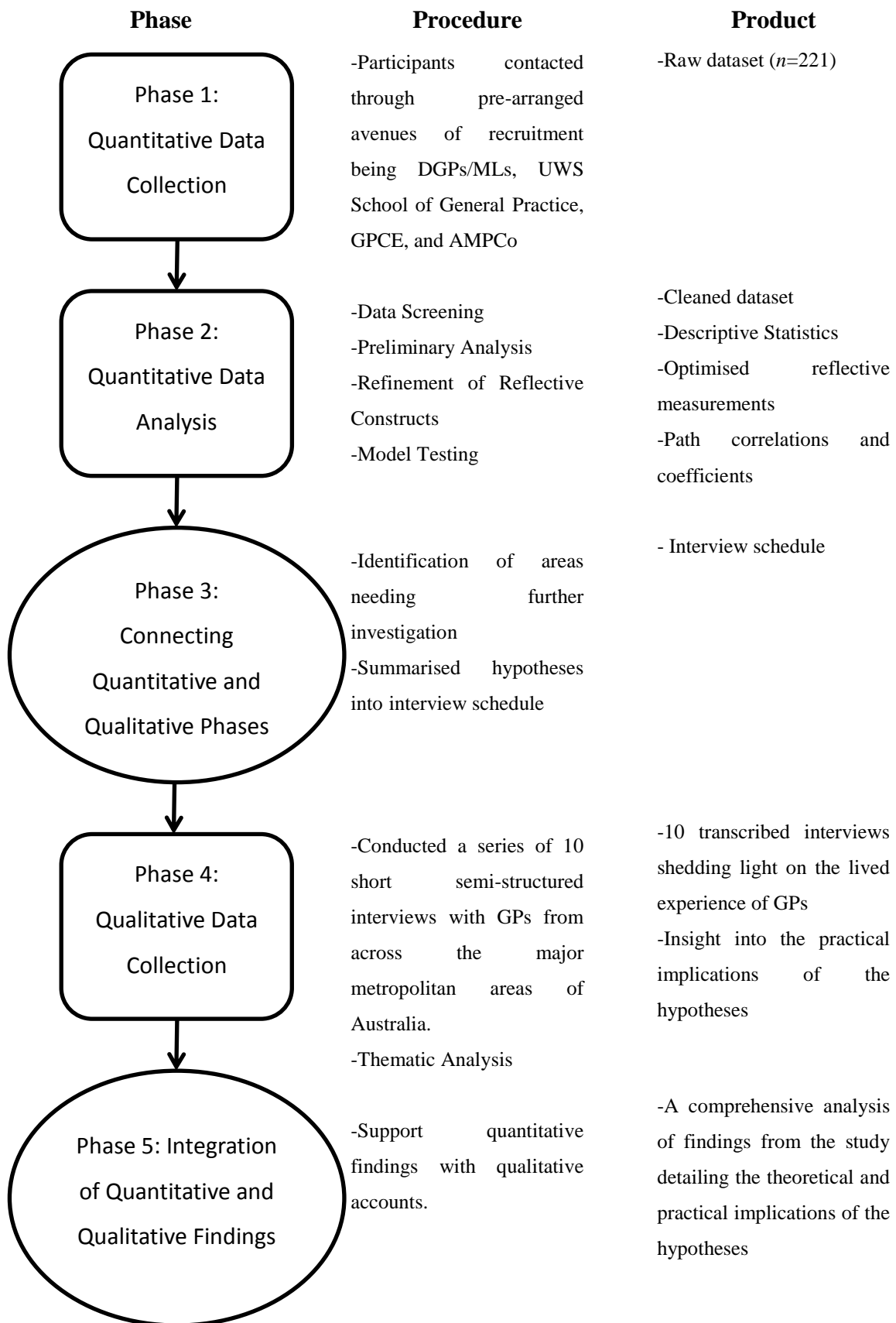
Given the aforesaid issues, the initial methodology was revisited. It was believed that more could be learnt by combining quantitative and qualitative data to gain a greater understanding of the lived experiences of GPs. In particular more information could be gathered regarding the interviewee's perception of and explicit impact of the stressful events they can potentially encounter. For more information regarding the interview schedule please refer to Appendix 2.

A mixed methods design was devised by complementing the surveys with semi-structured GP interviews. The primary purpose of the interviews was to gain a further insight into the lived experiences of GPs, with particular reference to GPs' experiences of burnout and WFC, and the impact those factors place on their likelihood to leave general practice.

According to Ivankova and colleagues (2006, p. 3), mixed methods research is a 'procedure for collecting, analysing, and "mixing" or integrating both quantitative and qualitative data at some stage of the research process within a single study for the purpose of gaining a better understanding of the research problem.' A mixed methods design seeks to gather the different perspectives that qualitative and quantitative data can provide to produce meaningful conclusions (Johnson et al., 2007, Johnson and Onwuegbuzie, 2004).

This study uses a mixed methods sequential explanatory design (Ivankova et al., 2006) to address the research question (see Figure 3.1). According to Creswell (2002, p. 566), this approach involves 'collecting quantitative data then collecting qualitative data to help explain or elaborate on the quantitative results'.

Figure 3.1: Visual model for mixed methods



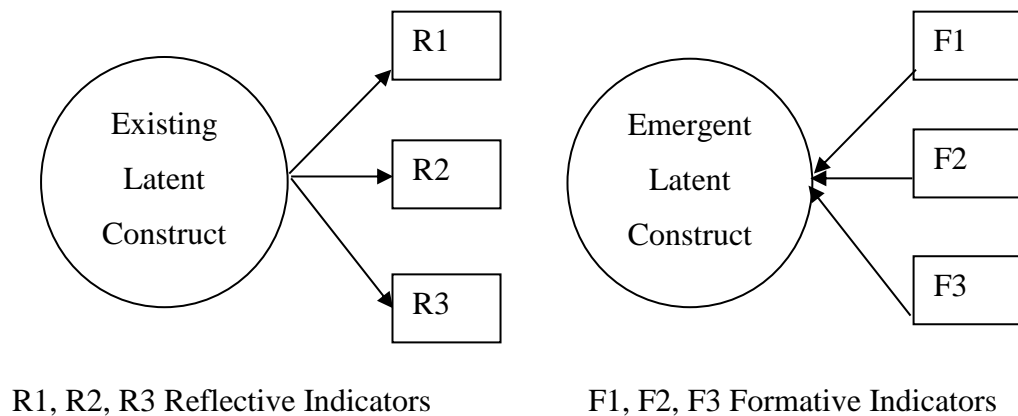
3.4.1 Phase 1 – Quantitative Data Collection

3.4.1.1 The Instrument

Quantitative data was collected using a specifically constructed survey consisting of existing scales. Each construct was operationalized by a previously validated scale. To address common method variance (CMV) (Rafferty and Griffin, 2004, Williams et al., 2010), another scale on ‘bureaucracy’ (Hage and Aiken, 1967) was also incorporated in the survey instrument. Particular attention was given to the relationship between the measures and the constructs; that is the relationship between the items and the construct they are measuring. A misspecification in any interrelationship would make the structural relationships between constructs irrelevant and unreliable (Mackenzie, 2001).

3.4.1.2 Reflective and Formative Measures

With PLS-based structural equation modelling (SEM) much consideration is typically given to the structural paths between the research constructs, as opposed to the relationship between the measures and the latent variable (Edwards and Bagozzi, 2000). A reflective measure is used when ‘indicators (or items) are seen as functions of the latent variable, whereby changes in the latent variable are reflected in changes in the observable indicators’ (Diamantopoulos and Siguaw, 2006, p. 263). Formative measures, on the other hand, exist when changes in the indicators determine changes in the value of the latent variable (Jarvis et al., 2003). In summary, reflective measures are those in which the items are seen as reflections of the latent variable, whereas formative measures are those in which the items themselves form to influence the latent variable (see Figure 3.2).

Figure 3.2: Reflective versus. Formative Measures¹

¹ Jarvis and colleagues (2003, p. 201)

Jarvis and colleagues (2003) detailed four primary decision rules to determine if a measure is reflective or formative. These include (1) the directionality of causality between items and the latent variable, (2) the inter-changeability of items, (3) the need for items to covary and (4) the need for items to share common antecedents and consequences, all of which are discussed below.

According to Jarvis and colleagues (2003) the first rule relates to the direction of causality between the construct and its indicators. As noted, the directionality of items in reflective measures flow from the latent variable; thus the latent variable influences the indicators. For a formative measure, the flow originates from the indicators towards the latent variable; thus a change in the indicators will cause a change in the latent variable.

The second rule relates to the inter-changeability of the items (Jarvis et al., 2003). According to Petter and colleagues (2007), this relates to the need for indicators to have similar content or if dropping an indicator alters the conceptual integrity of the construct. In a formative measure, as the indicators form the latent variable, each item can potentially measure a different element of the construct; therefore no common content is required. However, as each item contributes to the establishment of the latent variable, if one item is dropped the construct would not be adequately represented. Within reflective measures indicators are required to be interchangeable and some are required to share common content or themes. As such dropping a single indicator should not compromise the conceptual clarity of the construct (Jarvis et al., 2003).

The third rule involves the need for items within the measure to covary with one and other (Jarvis et al., 2003, Petter et al., 2007). Given that reflective measures require internal reliability and consistency, its items must covary. Therefore an increase in one indicator will be mirrored by the other indicators. With formative measures, there are no such requirements.

The fourth rule relates to the need for the items of the measure to share common antecedents and consequences (Petter et al., 2007). As the indicators of reflective measures reflect the same underlying construct, they must have the same antecedents and consequences (Jarvis et al., 2003). As indicators of formative measures do not cover the same element of the construct and the items are not interchangeable, there are no assumptions that the antecedents or consequences of the indicator are common. Thus, Jarvis and colleagues' (2003) classification criteria was used to determine the nature of the scales used to ensure appropriate analysis of the data collected.

3.4.1.2.1 Resilience

In accordance with the aforesaid criteria (Jarvis et al., 2003), the 26-item resilience scale is a reflective measure. Wagnild and Young (1990) identified five characteristics of resilience; namely perseverance, equanimity, meaningfulness, self-reliance and existential aloneness. Based on this understanding, the resilience scale (Wagnild and Young, 1993b) was operationalised to reflect the presence of resilience in the participants life.

Perseverance refers to a 'willingness to continue the struggle to reconstruct one's life and remain involved in the midst of uncertainty' (Wagnild, 2009, p. 106). This is congruent with the notion of the 'ability to bounce back from negative emotional experiences' (Tugade and Frederickson, 2004, p. 320) common in most definitions of resilience (Ahern et al., 2006). Equanimity is the ability to 'see the silver lining during difficult or trying times' (Astin and Keen, 2006, p. 40), which tends to moderate extreme responses to adversity (Wagnild, 2009). Meaningfulness is the recognition that there is something to live for; this allows individuals to focus on positive outcomes or events that lie outside of the negative situation they are in. Self-reliance can be translated as self-belief and having the presence of mind to draw on personal strengths to

progress through a tough situation. Existential aloneness, is ‘the realisation that each person’s life path is unique’ (Wagnild and Young, 1990, p. 254).

Resilience also fulfils Jarvis and colleagues (2003) second criterion, the interchangeability of items. The resilience scale includes a number of items that overlap. Examples include, ‘When I make plans, I follow through with them’ and ‘I am determined’; ‘Keeping interested in things is important to me’ and ‘I keep interested in things’; ‘I can get through difficult times because I’ve experienced difficulty before’ and ‘When I’m in a difficult situation I usually find my way out of it’. As various items measure similar areas of resilience, they share common antecedents and consequences, therefore further confirming the reflective nature of the resilience scale.

3.4.1.2.2 Job Demands

Job demands in the path model were operationalized as a second order latent variable. These were the nine-item psychological job demands scale (Karasek, 1979) and the eight-item role conflict (Rizzo et al., 1970). Given Jarvis and colleagues’ (2003) criteria, both scales are formative in nature.

The psychological job demands subscale refers to the ‘psychological stressors present in the work environment’ (De Jong et al., 1999, p. 1150). The direction of causality between the scale items and the construct shows the level of psychological demands being formed through the indicators. Additionally there is no repetition of measurement as each item is directly related to a different contributor of psychological job demands, as such, eliminating any one item would prohibit the holistic measurement of the latent construct, psychological job demands. As the items measure different elements of or contributors to psychological job demands, the causes and effects of each item would differ. According to Jarvis and colleagues’ (2003) criteria, psychological job demands represent a formative measure.

The role conflict scale (Rizzo et al., 1970) is also formative in nature. Role conflict occurs when expectations about behaviour and experience do not match reality (Akhtar and Lee, 2010). The scale invites participants to recall experiences or emotions that may have occurred in the past which generates role conflict, thus satisfying the first criterion proposed by Jarvis and

colleagues' (2003). As the indicators relate to different occurrences of role conflict, deleting any item would result in an incomplete measurement of role conflict. Due to the differences of potential occurrences measured, the cause and flow on implications of these occurrences are not common. The potential covariance between the items is insignificant. Thus according to Jarvis and colleagues' (2003) criteria, role conflict is a formative measure.

3.4.1.2.3 Job Resources

Job resources were assessed through the use of two scales: the 22-item job control scale (Dwyer and Ganster, 1991) and the five-item supervisory support scale (Karasek, 1979). Similar to job demands, these scales are both formative in nature.

The job control scale measures perceived control over the work environment (Akhtar and Lee, 2010) formed through having direction over various aspects of their work-life. Specifically the scale measures the contribution of 'control over the variety of tasks performed, the order of task performance, pacing, scheduling of rest breaks, procedures and policies in the workplace and arrangement of the physical environment' in forming overall job control (Dwyer and Ganster, 1991, p. 600). According to the criterion outlined by Jarvis and colleagues (2003), job control will be treated as a formative measure. As the measurement items represent a different component of job control, the omission of one item would compromise any measurement taken. The lack of repetition of items reinforces the importance of each particular item in gaining a sound measurement of job control.

The supervisory support scale is a subsection of the job content questionnaire (Karasek, 1985), predominately measures levels of managerial support (Ganster, 1989). The direction of causality flows from the items to the latent variable, which is indicative of a formative measure (Jarvis et al., 2003). In other words, the actions of supervisors measured through the scale form levels of supervisory support. It is also evident that each of the five items refers to a different contributor of supervisory support thus dropping an item would impact on the completeness of any measurement gained. Based on the criteria

suggested by Jarvis and colleagues (2003), supervisory support will be analysed as a formative measure.

3.4.1.2.4 Burnout

Burnout was measured using the 19-item CBI which identifies the individual's attribution of burnout to a specific domain being either from personal, work-related or client-related origins. The scale was constructed to measure the individuals 'attribution of fatigue and exhaustion to specific domains or spheres in the person's life' (Kristensen et al., 2005, p. 197).

In accordance with Jarvis and colleagues' (2003) criteria, the causality of the relationship between the indicators and the latent variable is reflective. The scale items refer to reflections of burnout rather than causes of burnout. For example, items such as: 'How often are you physically exhausted,' 'How often are you emotionally exhausted' and 'Do you feel burnt out because of your work', assume burnout is experienced by the respondents. In accordance with the second criterion the construct is reflective due to the overlapping of common themes across multiple items. Examples include 'Are you tired of working with clients' and 'Do you sometimes wonder how long you will be able to continue working with clients'. This inter-changeability denotes the reflective nature of this construct. As the CBI measures personal burnout, work-related burnout and client-related burnout, the causes of each type of burnout are common amongst the indicators within those sub-categories. Accordingly burnout was analysed as a reflective construct.

3.4.1.2.5 Work-Family Conflict

WFC was measured using the 18-item multidimensional WFC scale developed by Carlson and colleagues (2000). According to Carlson and colleagues (2000, p. 249), WFC is 'a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible' in some way. The WFC scale draws on the work of Greenhaus and Beutell (1985), who identified three forms of WFC, as well as Gutek and colleagues (1991), who proposed the dual direction of WFC, to form a six dimensional construct of WFC. The three forms of WFC identified by Greenhaus and Beutell (1985) were time-based conflict, strain-based conflict and behaviour-based conflict. These refer to the

origin of the conflict. Time-based conflict occurs when the time consumed by one role makes it difficult to participate in the other. Strain-based conflict, ‘suggests that strain experienced in one role intrudes into and interferes with participation in another role’ (Carlson et al., 2000, p. 250). Behaviour-based conflict occurs when specific behaviours required in one role are not compatible with the expected behaviours in the other domain. Gutek and colleagues (1991) in alignment with Greenhaus and Beutell (1985) suggested that the origins of each form of WFC can originate from both work and family roles; this provided the groundwork for the six dimensional measurement of WFC.

WFC was analysed as a formative scale, as per Jarvis and colleagues (2003). Reflecting on the initial criterion, the items of the WFC scale entice WFC. The items in the scale all refer to situations that contribute to WFC. This is illustrated in various items of the scale, which include ‘I have to miss work activities due to the amount of time I must spend on family responsibilities’ and ‘My work keeps me from my family activities more than I would like’. Both examples denote the formation of WFC, rather than simply reflecting WFC. The second criterion to determine scale orientation pertains to the interchangeability of the indicators; that is the necessity of all items to ensure construct integrity. As each item in the measure relates to a different element of WFC, the elimination of one element would greatly compromise the completeness of the measure. For these two reasons, WFC was analysed as a formative scale.

3.4.1.2.6 Intention to Quit

Intention to quit was measured using a two-item scale developed by Begley and Czajka (1993). The scale measures the likelihood of voluntary turnover in the assumption that high levels of an intention to quit are systematic of systemic problems. The indicators are a reflection of the latent variable, which according to Jarvis and colleagues (2003), indicates a reflective measure. Due to dissatisfaction there is an intention to quit the profession (Begley and Czajka, 1993), which can be seen through the reflective nature of the measure. Due to the method of quantitative data analysis, SmartPLS allows the use of two-item constructs (Ringle et al., 2005).

3.4.1.2.7 Summary of Formative and Reflective Scales

As outlined above, the model consists of a conglomeration of reflective and formative constructs, as detailed in Table 3.4.

Table 3.4: Summary of Formative and Reflective Scales

Scale	Source	Nature
Resilience Scale	(Wagnild and Young, 1993a)	Reflective
Psychological Job Demands Scale	(Karasek, 1979)	Formative
Role Conflict Scale	(Rizzo et al., 1970)	Formative
Job Control Scale	(Dwyer and Ganster, 1991)	Formative
Supervisory Support Scale	(Karasek, 1979)	Formative
Work-Family Conflict Scale	(Carlson et al., 2000)	Formative
Copenhagen Burnout Inventory	(Borritz and Kristensen, 1999a)	Reflective
Intention to Quit Scale	(Begley and Czajka, 1993)	Reflective

3.4.2 Common Method Variance

Common method variance (CMV) can influence the reliability of quantitative findings (Chang et al., 2010, Lindell and Whitney, 2001). CMV refers primarily to variance that can be attributed directly to the measurement method as opposed to the constructs the measures represent (Podsakoff et al., 2003). CMV can inflate and misrepresent correlations between two variables (Lindell and Whitney, 2001). The cause of CMV lies within three factors – namely a common source or rater, item characteristics, and measurement context. Each is addressed in turn.

Method effects produced by a common source or rater is the most widely acknowledged source of CMV (Podsakoff et al., 2003). Various theories have been used to explain this including the consistency motif (Osgood and Tennenbaum, 1955), implicit theories (Berman and Kenny, 1976, Chapman and Chapman, 1969) and social desirability (Crowne and Marlowe, 1964). The consistency motif refers to the problems that can occur when respondents try to align their cognitions and attitudes (Podsakoff et al., 2003) and in doing so produce relationships that may not exist in reality (Podsakoff and Organ, 1986). Respondent assumptions and beliefs of relationships in the real life setting can steer responses towards the direction the individual believes to be true (Chapman and Chapman, 1969, Jenkins and Ward, 1965). Social desirability occurs when participants skew their responses to a more culturally and/or socially appropriate one, regardless of their feelings and experiences.

This can influence the results of the study to the point that they may not truly represent reality (Podsakoff et al., 2003, Podsakoff and Organ, 1986).

CMV can also occur because of the questionnaire items. If the wording of an item is too complex or ambiguous, the findings generated will be influenced. Spector (1992) suggests the use of technical terms or even colloquial language can influence the results obtained. According to Peterson (2000) this can occur because of the use of words that have multiple meanings or the use of unfamiliar terms. These problems can lead to CMV when individuals misinterpret the items and use their implicit theories based on this misconception, which further influences their responses (Gioia and Sims, 1985).

The cause of CMV can also be traced to the measurement context, like participant mood at the time of participation which is known as a transient mood states (TMS) (Podsakoff et al., 2003). TMS represents response variation due to the participant's mood. Certain experiences may trigger a greater than normal awareness of various factors that are not consistent with the long term experiences of the individual (Podsakoff et al., 2003). If participation occurs during this time, responses can be influenced. Through having a single source of data, the possibility of the presence of CMV is constant.

3.4.2.1 Techniques to Control Common Method Variance

Various statistical and procedural checks have been used to control the influence of CMV. The most common are the Harman's single factor test, the use of multiple data sources, and marker variables.

Harman's single-factor (or no-factor) test (Podsakoff et al., 2003) involves loading all items into an exploratory factor analysis (EFA) to examine the unrotated factor solution and identify the number of factors needed to account for the variance in the variables (Chang et al., 2010). According to the Harman's single-factor test, CMV is present if one factor accounts for the whole, or a majority of the covariance between measures.

CMV can be avoided by using different data sources. In the context of research additional measurements could be obtained from co-workers, supervisors or significant others. Triangulating different datasets prevents CMV. In the

context of this study in which GP responses are confidential, data collection from multiple sources was not appropriate. Furthermore, as this study includes constructs that are not easily measured by direct observation, such as personal feelings and emotions, it cannot be measured by a third party.

Marker variables (MV) are considered the best way to estimate CMV in a dataset (Lindell and Whitney, 2001, Rafferty and Griffin, 2006). MVs are variables that are selected based on the knowledge that they are theoretically unrelated to the other constructs and generate an expected correlation of close to zero for at least one variable. When the data are analysed for path coefficients and correlations, the MV is inserted and should have minimal correlations with most variables and a correlation of close to zero with at least one other. Following Griffin's advice (e.g. Rafferty and Griffin, 2006), the MV option was selected, with further detail provided in this chapter.

3.4.3 Survey Distribution

Due to previously mentioned challenges, the survey was distributed via several avenues simultaneously. These include the DGPs/MLs, General Practice Conference and Exhibition (GPCE), UWS General Practice Supervisors and via AMPCo, each of which are detailed as follows.

3.4.3.1 Divisions of General Practice / Medicare Locals

GPs were contacted through the relevant DGP/ML with a RRMA classification of 1, as determined by the address of their head office. The DGPs/MLs advertised the project to their members as they saw fit. The most common method of advertisement was through a short description published in their monthly emailed newsletters. Within these advertisements GPs were informed about the aims of the project and invited to participate in the online survey through a hyperlink. At a later date, the DGPs/MLs were contacted to remind their members about the project. As the project involved a variety of DGPs/MLs, the timelines for distribution and follow up varied slightly.

3.4.3.2 General Practice Conference and Exhibition

The project was promoted at the GPCE 2012 to invite voluntary participation of GP delegates. Participation involved completing a paper-based survey onsite

or completing an electronic version of the survey at a time convenient for the participant. The GPs who expressed interest in the study were provided with an information pack that included a brief description, a paper-based form of the survey and a hyperlink to allow online participation. To protect anonymity, respondents were requested to deposit completed surveys in a sealed box.

3.4.3.3 University of Western Sydney GP Supervisors

GP supervisors that oversee UWS students received an email invitation from the UWS Head of General Practice inviting their participation. The email contained similar information to that circulated by the DGPs/MLs with the addition of a unique URL to access the online survey and to aid follow-up. To ensure participant confidentiality, a list of unique URLs was forwarded to the UWS Department of General Practice, which then assigned a URL to each GP supervisor. For follow-up, the department was sent a list of the used URLs, which were matched up with GPs and were therefore excluded from the follow-up procedures.

3.4.3.4 Australasian Medical Publishing Company

Following the contingency plans described earlier, GPs from NSW and VIC were contacted via AMPCo. AMPCo is a publishing house which is responsible for the releasing of the Medical Journal of Australia and through that forms lists of contact details for GPs that it sells for research purposes.

3.4.3.4.1 New South Wales

All NSW GPs currently consulting in a practice with RRMA 1 classification, whose details were also available through AMPCo were contacted via email. All potential participants were provided with information regarding the project as well as a URL to allow access to the survey online. The request for unique URLs, as adapted in the UWS GP Supervisor group, was not fulfilled. For this reason, subsequent contact with GPs who had not completed the survey was not possible.

3.4.3.4.2 Victoria

All Victorian GPs consulting within a RRMA 1 classification, with details available through AMPCo, were contacted via email. All potential participants

were provided with information regarding the project as well as a unique URL to access the online survey. All participants who did not complete the survey, as traced through the use of the URLs, were sent a reminder email reinviting the GP to participate.

3.4.4 Phase 2 – Quantitative Data Analysis

The analysis of quantitative data began with the digitising of all paper-based responses which were then added to other responses from similar avenues of participation. All responses were then analysed through the use of Microsoft Excel, SPSS v.20, AMOS, and SmartPLS (Ringle et al., 2005) to draw the maximum number of meaningful conclusions from the relatively small sample size.

Data were initially cleaned through Microsoft Excel, with all records containing answers for less than 90% of the survey items being deleted. The data was then exported to SPSS v.20 where the data were further coded, including the recoding of all non-numeric data and negatively worded items. Through SPSS descriptive statistics were generated. Once the data had been analysed through SPSS, the reformatted data were transferred into AMOS.

AMOS is a statistical program that aids the interpretation and optimisation of constructs and path models (Byrne, 2010, Arbuckle, 2008). As the constructs had established factor structures, an EFA was unnecessary. A Confirmatory Factor Analysis (CFA) was performed on all reflective constructs (presented in section 3.6) to ensure the constructs were optimised to better suit the current research project. Based on this analysis the reformatted constructs, and the relationships between them were investigated using SmartPLS (Ringle et al., 2005). This was required due to the composition of the current model as AMOS does not allow for the testing of formative and reflective constructs within the one model (Podsakoff et al., 2003). Using SmartPLS (Ringle et al., 2005), the constructs, and proposed linkages between the constructs hypothesised in chapter two were analysed.

3.4.5 Phase 3 – Connecting Quantitative and Qualitative Phases

An analysis of the quantitative data revealed discrepancies between the findings and extant research. In addition, it was believed that the findings of

various hypothesises could be further explained through personalised experiences. In order to gain a complete understanding of the problem situation and the lived experience of GPs, further investigation was required. According to Ivankova and colleagues (2006), a sequential mixed-methods typology offers framework on the incorporation of qualitative methods in order to gain a clearer understanding than what could be achieved through purely quantitative measures. As previously detailed in section 3.4, the sequential mixed methods approach (Ivankova et al., 2006) was used in the current study to gain a more complete understanding of the complexities of the situation. Accordingly further investigation was warranted through a series of deductive semi-structured short interviews.

The interview schedule was developed to address various areas of the study that required further investigation. The interviews concentrated on six main focus areas a summary of which is available in appendix 2. The appropriateness of the questions was initially validated by the supervisory panel consisting of qualitative experts and currently practicing GPs.

3.4.6 Phase 4 – Qualitative Data Collection

Interviewees were sourced from previous survey respondents who opted to be informed of future opportunities to be involved in the project. These thirty GPs were emailed with an invitation to participate in a 30-minute semi-structured interview which aimed to gain a further insight into the lived experiences of GPs. From those 30, four participants indicated that they were no longer practicing or no longer wanted to be contacted. Interviewees obtained from the initial group were offered the opportunity to invite their fellow co-workers or professional contacts to participate in the interview process.

The interview schedule was used as a guide to ensure all relevant issues were addressed through the conversational-style interviews. The interview schedule included six main questions relating to (1) perceived stressors of general practice; (2) reasons why demands are seen as stressful; (3) impact of stress on the life and wellbeing of the GP; (4) factors that worsen demands; (5) strategies/practices to manage stress; (6) overall satisfaction with general practice. A pilot study of the interview schedule was conducted with three

practicing GPs from which no issues were raised. In total ten semi-structured interviews were conducted, ranging from 30-90 minutes in duration. The interviews were conducted by the primary researcher and the primary supervisor assisted when possible. Interviews were undertaken via telephone or video conferencing with audio data being recorded for later transcription and analysis.

Concurrent to the interview process, the iterative phase of analysing the qualitative data began. Data was initially transcribed before the deductive thematic analysis was undertaken. The data gathered throughout the interview process was categorised into related themes. The most common themes that emerged from the semi-structured interviews included the benefits of collegial and supervisory support, reduced levels of practice-related satisfaction, practices to limit potential for WFC, benefits of workplace flexibility, as well as common sources of GP stress. Based on this thematic analysis it was found that thematic saturation was reached, thus declaring the conclusion of the data collection phase.

The concept of saturation, although on the surface may appear simple, is far more complex. Theoretical saturation, as drawn from grounded theory, occurs when the collection of additional data does not shed any new light on the subject area (Glaser and Strauss, 1967). Due to the complexities associated with developing research techniques, the use of the term 'saturation' in its purest form is not sufficient (Mason, 2010). In terms of the current study, thematic saturation was declared according to the guidelines proposed by Kerr and colleagues (2010).

Thematic saturation differs from theoretical saturation. Thematic saturation occurs at the point where the further collection of data would yield no significant developments (Green and Thorogood, 2004). It is therefore reached at the point where 'there are fewer surprises and there are no more emergent patterns in the data' (O'Reilly and Parker, 2012, p. 3). Theoretical saturation on the other hand, 'occurs when all of the main variations of the phenomenon have been identified and incorporated into the emerging theory' (Guest et al., 2006, p. 65). For the purposes of this study, thematic saturation was deemed sufficient to address the research question within the defined parameters.

Thematic saturation occurs when additional interviews generate significantly lower numbers of unique themes (Jimenez et al., 2012). Based on the works of Jimenez and colleagues (2012) and Kerr and colleagues (2010), thematic saturation was reached after 10 interviews (see Table 3.5).

Table 3.5: Interviewee Themes

Participant	N° of Themes	N° of New Themes	Themes Repeated at Time of Analysis	No. of Unique Themes	Themes Repeated Throughout Sample
1	23	23	0 %	1	95.65 %
2	32	20	37.5 %	3	90.63 %
3	23	9	60.87 %	4	82.61 %
4	30	10	66.7 %	4	86.67 %
5	14	7	50 %	0	100 %
6	34	5	85.24 %	1	97.06 %
7	29	4	86.21 %	0	100 %
8	22	4	81.82 %	3	86.36 %
9	44	3	93.18 %	3	93.18 %
10	35	2	94.29 %	2	94.29 %

3.4.7 Phase 5 – Integration of the Quantitative and Qualitative Results

The output of the thematic analysis was deductively analysed into groupings which spoke directly to the hypothesised relationships. This occurred both in terms of when the GP experience mirrored the quantitative findings, clarifying the practical implications of the findings, as well as when the GP experience differed from the expected, thus identifying divergence from the hypothesised relationships. Based on the synthesis of quantitative and qualitative data, the results of this study provide a more complete understanding of the lived experiences of GPs thus enhancing their practical value.

3.5 Data Collection

3.5.1 Survey Participants

Participants were drawn from GPs currently practicing within the urban areas of New South Wales, Queensland, Victoria, and South Australia. The sample was restricted to urban areas due to the differing roles that rural and urban GPs (Dua, 1997). Data collection was undertaken through six primary recruitment avenues, being through: i) DGPs/ MLs, ii) GPCE 2012, iii) UWS GP Supervisors, iv) AMPCo – NSW, and v) AMPCo - VIC. A robust data collection strategy was necessary due to the poor participation rates of GPs (Aitken et al., 2008, Bonevski et al., 2011), as well as the impacts of national reforms occurring within general practice (Department of Health and Human Services, 2012, General Practice SA, 2011).

3.5.1.1 Divisions of General Practice / Medicare Locals

The initial recruitment strategy involved working with DGPs and to invite their member GPs to participate in the project. As the DGP's amalgamated into MLs, results are presented by MLs. A total of 30 MLs were contacted from ACT (1), NSW (13), QLD (3), VIC (10) and SA (3). ML personnel were asked to include project information in their regular newsletter to GP members. As a result, seventy usable responses were received (response rate: 0.35%; see Table 3.6).

The respondents who were affiliated with the DGPs/MLs were predominantly female (62.9%), married (77.1%), and many were older than 50 years of age (42.9%). On average, these respondents had been in practice for 18.67 years, which represented the lowest average across the 5 respondent cohorts (see Table 3.6).

Table 3.6: Respondents (n=221)

	DGP/ML Participan ts	GPCE Participan ts	UWS GP Superviso rs	AMPCo NSW	AMPCo VIC	TOTAL
Gender						
Male	26 (37.1%)	8 (61.5 %)	9 (75.0 %)	13 (34.2 %)	44 (53.7 %)	103 (46.6%)
Female	44 (62.9 %)	5 (38.5%)	3 (25.0 %)	25 (65.8 %)	38 (46.3 %)	118 (53.4%)
Age						
21-30	3 (4.3 %)	0 (0.0 %)	0 (0.0 %)	1 (2.6 %)	3 (3.7 %)	7 (3.2%)
31-40	16 (22.9 %)	2 (15.4 %)	0 (0.0 %)	5 (13.2 %)	20 (24.4 %)	44 (19.9%)
41-50	21 (30.0 %)	1 (7.7 %)	1 (8.3 %)	13 (34.2 %)	17 (20.7 %)	54 (24.4%)
51-60	21 (30.0 %)	5 (38.5 %)	7 (58.3 %)	11 (28.9 %)	23 (28.0 %)	68 (30.8%)
60+	9 (12.9 %)	5 (38.5 %)	4 (33.3 %)	8 (21.1 %)	19 (23.2 %)	48 (21.7%)
Marital Status						
Single	11 (15.7 %)	1 (7.7 %)	0 (0.0 %)	7 (18.4 %)	15 (18.3 %)	35 (15.8%)
Married	54 (77.1 %)	9 (69.2 %)	12 (100 %)	28 (73.7 %)	62 (75.6 %)	170 (76.9%)
De Facto	5 (7.1 %)	3 (23.1 %)	0 (0.0 %)	3 (7.9 %)	5 (6.1 %)	16 (7.2%)
Children						
0	27 (38.6 %)	8 (61.5 %)	3 (25.0 %)	14 (36.8 %)	32 (39.0 %)	85 (38.5%)
1	12 (17.1 %)	2 (15.4 %)	2 (16.7 %)	6 (15.8 %)	15 (18.3 %)	39 (17.6%)
2	16 (22.9 %)	3 (23.1 %)	5 (41.7 %)	13 (34.2 %)	20 (24.4 %)	58 (26.2%)
3	12 (17.1 %)	0 (0.0 %)	2 (16.7 %)	3 (7.9 %)	13 (15.9 %)	32 (14.5%)
4	2 (2.9 %)	0 (0.0 %)	0 (0.0 %)	2 (5.3 %)	1 (1.2 %)	5 (2.3%)
5	1 (1.4 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	1 (0.5%)
6	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	0 (0.0 %)	1 (1.2 %)	1 (0.5%)
Grad Yr						
Min.	1969	1963	1967	1953	1954	1953
Max.	2007	2004	2013	2007	2008	2013
Mean	1989	1985	1984	1984	1987	1987
Median	1987	1982	1985	1984	1986	1986
Mode	2003	1978	1977	1978	1984	2003
Yrs in General Practice						
Min.	2	5	13	2	1	1
Max.	39	47	39	55	63	63
Mean	18.67	22.69	27.83	21.84	19.39	20.26
Median	20	25	30	23	20	22
Mode	20	5	13	25	22	20
GPs in Practice						
Min.	1	1	1	1	1	0
Max.	15	10	7	11	23	23
Mean	4.64	5.32	3	4.08	5.68	4.89
Median	4	5	1.5	4	5	4
Mode	4	1	1	1	5	1
GP Nurses in Practice						
Min.	0	0	0	0	0	0
Max.	6	10	2	3	8	10
Mean	1.44	2.58	0.67	0.97	1.93	1.57
Median	1	2	0.5	1	2	1
Mode	1	1	0	0	1	1

3.5.1.2 General Practice Conference and Exhibition

At the 2012 GPCE, the project was exhibited to raise awareness among conference delegates and facilitate participation opportunities. Thirteen completed surveys were returned (response rate: 6%; see Table 3.6).

Respondents sourced from the GPCE were predominantly male (61.5%) with a considerable proportion older than 50 years of age (77%). Many respondents were married (69.2%) with no dependent children (61.5%). The cohort of respondents had the highest level of practice nurses across all 5 cohorts; averaging 2.58 full-time equivalent practice nurses per practice (see Table 3.6).

3.5.1.3 University of Western Sydney GP Supervisors

The UWS School of General Practice issued an email invitation to its 92 GP Supervisors. Twelve completed surveys were subsequently returned (response rate: 13.04%). The third cohort were predominantly male (75%) with 91.6 % of the cohort being over 50 years of age. Despite being more likely to work in a smaller practice, this cohort recorded the highest levels of experience (27.83 years) (see Table 3.6).

3.5.1.4 Australasian Medical Publishing Company – NSW

The respondents affiliated with the fourth cohort, AMPCo NSW, were predominantly female (65.8%) with the majority of respondents being married (73.7%) (see Table 3.6). The fourth cohort had the lowest response rate, with only 38 of the 1,623 invited GPs choosing to participate in the study (response rate: 2.34%).

3.5.1.5 Australasian Medical Publishing Company – VIC

The respondents associated with the fifth cohort, AMPCo Victoria, were the most equally distributed in gender, with 44 male (53.7%) and 38 female (46.3%) respondents. Congruent with other cohorts, the vast majority of GPs were married (75.6%) with 42.7% being responsible for 1-2 dependent children. Respondents from this cohort came from larger practices (average of 5.68 FTE GPs) (see Table 3.6). After the necessary follow-up, 82 of the 1,360 GPs completed the survey online (response rate: 6.03%).

3.5.1.6 Respondents

Survey respondents include 221 GPs practicing within a RRMA classification of 1 from 35 different MLs/primary care organisations such as Justice Health. A large proportion of the sample was married (76.9%) with approximately half of all respondents aged over 50 years (52.5%) and an average of twenty years of general practice experience (see Table 3.6).

3.5.2 Interviewees

Interviewees were sourced from survey respondents who wished to be further involved in the study. These GPs were offered to refer co-workers to participate in the interview process. In total 30 GPs were contacted with 10 interviews conducted before thematic saturation was reached (see Section 3.4.6 and Table 3.7).

Table 3.7: Interviewees

	Interviewee Attributes
Gender	
Male	6 (60%)
Female	4 (40%)
Age	
21-30	0 (0%)
31-40	0 (0%)
41-50	4 (40%)
51-60	3 (30%)
60+	3 (30%)
Marital Status	
Single	1 (10%)
Married	90 (90%)
De Facto	0 (0%)
Children	
0	4 (40%)
1	1 (10%)
2	3 (30%)
3	2 (20%)
4	0 (0%)
5	0 (0%)
6	0 (0%)
Grad Yr	
Min.	1962
Max.	2000
Mean	1981
Median	1980
Mode	NA
Yrs in General Practice	
Min.	1
Max.	63
Mean	20.26
Median	22
Mode	NA

	Interviewee Attributes
GPs in Practice	
Min.	3
Max.	6
Mean	4.2
Median	4
Mode	4
GP Nurses in Practice	
Min.	0.5
Max.	3
Mean	1.45
Median	1.5
Mode	1.5

The semi-structured interviews were guided by a interview schedule (Appendix 2) to ensure consistent content was addressed across the interviews. The interview schedule covered such topics as perceived stressful events encountered, impact of job related events, factors that aid or exacerbate the impact of the job related events and overall satisfaction with general practice. From these general topics, the data was sorted into various themes that were categorised by common themes that interviewees spoke to. Examples of which include bureaucratic demands; demanding patients; technology complicating general practice; flexibility in working conditions and unrealistic Principal expectations.

3.6 Refining Measurement Models for Reflective Constructs

To maximise the applicability of the measurement tools used to measure the reflective constructs a series of CFAs were undertaken. Based on the CFA, the compositions of indicators used to measure the reflective constructs were altered accordingly. Removing indicators from reflective constructs does not alter the conceptual domain of the construct (Jarvis et al., 2003, Petter et al., 2007). Removal of items in reflective measures result in more manageable, succinct measures, allowing an accurate measurement of the latent construct (Conway and Huffcutt, 2003). To confirm the construct validity and the composition of the reflective measures, CFAs were performed on all reflective constructs using AMOSv21 (Byrne, 2010).

Eight tests were undertaken to confirm construct validity and composition (Byrne, 2010, Wang and Ahmed, 2004). In order to ensure construct validity eight measurements were taken. These include Comparative Fit Index (CFI) ≥ 0.93 ; Tucker-Lewis Index (TLI) ≥ 0.9 ; Goodness of Fit Index (GFI) ≥ 0.9 ; Root Mean Square Error of Approximation (RMSEA) ≤ 0.05 ; pclose; Standardised Root Mean Square Residual (SRMSR) ≤ 0.05 ; Chi-Square Model Fit; Chi-Square Model Fit / Degrees of Freedom ≤ 2.00 .

In order to ensure model fit (Byrne, 2010), the refined scales were subjected to tests to ensure convergent validity (Hair et al., 2006), discriminate validity (Fornell and Larcker, 1981) and internal reliability (Gliem and Gliem, 2003). According to Hair and colleagues (2006), convergent validity is achieved when the Average Variance Extracted (AVE) exceeds 0.5. Discriminant validity occurs when the square root of the AVE of the scale exceeds the correlations that scale has with other latent variables in the model (Fornell and Larcker, 1981). Sufficient internal reliability exists when $\alpha \geq 0.5$ (Hair et al., 1998).

3.6.1 Resilience Scale

The construct validity and composition of the resilience scale was investigated guided by Byrne (2010) and Wang and Ahmed (2004). Eight tests were undertaken to confirm construct validity and composition. As a result of the CFA, the original two factor structure was confirmed. However a more succinct 11-item composition was identified, in preference to the original 26-item composition. Accordingly items 1, 3, 4, 5, 7, 8, 9, 11, 12, 15, 20, 21, 22, 24 and 25 were removed. The psychometric properties of the refined measurement for resilience indicate an acceptable fit (Tabachnick and Fidell, 2001) (see Tables 3.8 and 3.9).

Table 3.8: Psychometric Properties of Resilience Scale

	Original Scale	Refined Scale
CFI (≥ 0.93)	0.88	0.99
TLI (≥ 0.9)	0.86	0.98
GFI (≥ 0.9)	0.80	0.95
RMSEA (≤ 0.05)	0.78	0.05
pclose fit	0	0.56
SRMSR (≤ 0.05)	0.06	0.03
Chi-Square Model Fit	663.73	58.69
Chi-Square Model Fit / Degrees of Freedom ≤ 2.00	2.31	1.47

Table 3.9: Refined Factor Structure and Composition of Resilience Scale

Item	Factor
2. I usually manage one way or another	Personal Competence
6. I feel proud that I have accomplished things in life	Personal Competence
10. I am determined	Personal Competence
13. I can get through difficult times because I've experienced difficulty before	Personal Competence
14. I have self-discipline	Personal Competence
17. My belief in myself gets me through hard times	Personal Competence
18. In an emergency, I'm someone people can generally rely on	Personal Competence
19. I can usually look at a situation in a number of ways	Personal Competence
23. When I'm in a difficult situation, I can usually find my way out of it	Personal Competence
16. I can usually find something to laugh about	Acceptance of Self and Life
26. I am resilient	Acceptance of Self and Life

Convergent validity was investigated by calculating the scale AVE following the formula proposed by Hair and colleagues (2006). The AVE of the resilience scale measured 0.89, surpassing the 0.5 rule of thumb for acceptable convergent validity (Hair et al., 1998).

Discriminate validity of the scale was established using Fornell and Larcker's (1981) test of discriminate validity. As a result, the resilience scale achieved discriminate validity (see Table 3.10).

Table 3.10 Discriminant Validity Test for Resilience Scale

		Exceeded by $\sqrt{\text{AVE}}$
AVE	0.89	
$\sqrt{\text{AVE}}$	0.94	
Correlation with Burnout	-0.17	Yes
Correlation with WFC	-0.19	Yes
Correlation with Job Demands	0.04	Yes
Correlation with Job Resources	0.33	Yes
Correlation with Intention to Quit	-0.16	Yes

Following the establishment of convergent and discriminate validity, the reliability of the scale was investigated. Using SmartPLS (Ringle et al., 2005), significant levels of reliability were established ($\alpha=0.87$) confirming the reliability of the scale.

Because the resilience scale exceeded the calculations for model fit, convergent and discriminate validity and the reliability analysis, the refined version of the resilience scale was used in this study.

3.6.2 Copenhagen Burnout Inventory

Following Byrne (2010) and Wang and Ahmed (2004), the same eight tests were undertaken using AMOS to confirm construct validity and composition. As a result of the CFA, the original three factor structure of the CBI was confirmed. However instead of the original 19-item measure, a more efficient 13-item measure was established. In accordance items 4, 8, 9, 10, 12 & 17 were removed. The psychometric properties of the refined CBI indicate an acceptable fit (Tabachnick and Fidell, 2001) (See Table 3.11 and 3.12).

Table 3.11: Psychometric Properties of CBI

	Original Scale	Refined Scale
CFI (≥ 0.93)	0.93	0.98
TLI (≥ 0.9)	0.91	0.97
GFI (≥ 0.9)	0.85	0.94
RMSEA (≤ 0.05)	0.09	0.06
pclose fit	0	0.12
SRMSR (≤ 0.05)	0.05	0.033
Chi-Square Model Fit	365.29	96.90
Chi-Square Model Fit / Degrees of Freedom ≤ 2.00	2.63	1.90

Table 3.12: Refined Factor Structure and Composition of the CBI

Item	Factor
1. How often do you feel tired?	Personal-Related Burnout
2. How often are you physically exhausted?	Personal-Related Burnout
3. How often are you emotionally exhausted?	Personal-Related Burnout
5. How often do you feel worn out?	Personal-Related Burnout
6. How often do you feel weak and susceptible to illness?	Personal-Related Burnout
7. Do you feel worn out at the end of the working day?	Work-Related Burnout
11. Is your work emotionally exhausting?	Work-Related Burnout
13. Do you feel burnt out because of your work?	Work-Related Burnout
14. Do you find it hard to work with clients?	Client-Related Burnout
15. Does it drain your energy to work with clients?	Client-Related Burnout
16. Do you find it frustrating to work with clients?	Client-Related Burnout
18. Are you tired of working with clients?	Client-Related Burnout
19. Do you sometimes wonder how long you will be able to continue working with clients?	Client-Related Burnout

Guided by Hair and colleagues (2006), the convergent validity of the revised CBI was investigated. The AVE of the scale was measured 0.82, indicative of adequate convergent validity. Guided by Fornell and Larcker (1981), the discriminate validity of the CBI was measured (see Table 3.13). As a result of these calculations, the revised CBI achieved discriminate validity.

Table 3.13: Discriminant Validity Test for the CBI

		Exceeded by $\sqrt{\text{AVE}}$
AVE	0.82	
$\sqrt{\text{AVE}}$	0.91	
Correlation with Resilience	-0.17	Yes
Correlation with WFC	0.68	Yes
Correlation with Job Demands	0.55	Yes
Correlation with Job Resources	-0.41	Yes
Correlation with Intention to Quit	0.51	Yes

Following the justification of scale validity, both in terms of convergent and discriminate validity, the reliability of the measure was analysed. As a result of the reliability analysis, significant levels of reliability were found for the reformed measure ($\alpha=0.89$).

The revised CBI surpassed the tests for model fit, convergent validity, discriminate validity and reliability. Therefore the newly adjusted 13-item measure was used in this project.

3.6.3 Intent to Quit Scale

Because the intent to quit scale includes only two items, a CFA could not be conducted. Nevertheless this scale still reported high levels of validity and reliability.

Table 3.14: Composition of the Intent to Quit Scale

Item
1. As soon as I can find a better job, I'll quit
2. I often think about quitting my job

The convergent validity of the intent to quit scale was measured as per Hair and colleagues (2006). Using SmartPLS (Ringle et al., 2005), an AVE of 1 was calculated, demonstrating legitimate convergent validity.

The discriminate validity of the scale was investigated as per Fornell and Larcker (1981). Based on these results, it is evident that the scale has sufficient discriminate validity (see Table 3.15).

Table 3.15: Discriminant Validity Test for the Intent to Quit Scale

		Exceeded by $\sqrt{\text{AVE}}$
AVE	1	
$\sqrt{\text{AVE}}$	1	
Correlation with Resilience	-0.16	Yes
Correlation with WFC	0.49	Yes
Correlation with Job Demands	0.38	Yes
Correlation with Job Resources	-0.36	Yes
Correlation with Burnout	0.51	Yes

Following the establishment of the convergent and discriminate validity of the scale, the reliability of the scale was analysed. As a result, the intent to quit scale has acceptable reliability measuring $\alpha = 0.88$.

3.7 Preliminary Data Tests

Prior to hypothesis testing, the dataset must be tested for non-response bias and CMV. A missing data analysis and power analysis must also be performed. Non-response bias represents the inconsistencies between the data collected and the reality it represents based on the selective participation of participants. This is important when studying GPs due to their historical low rates of research participation (Aitken et al., 2008, Templeton et al., 1997). As all data was collected from a common source, data may be skewed by CMV. A test for CMV, as per Rafferty and Griffin (2004) was undertaken, which is further

detailed in section 3.7.2. During data collection, several surveys were returned which contained missing data. If data was missing at random, the remainder of the survey can be retained with the missing data being replaced by item means. As per the guidelines of Mason and Lind (1993), a missing data analysis was undertaken. The final area of preliminary analysis, the power analysis, was undertaken following the guidelines of Green (1991).

3.7.1 Non-Response Bias

As participation was voluntary, there is potential for non-response bias. Various studies have sought to investigate reasons for non-response of GPs to previous research projects (Kaner et al., 1998, MacPherson and Bisset, 1995), suggesting the underlying factors determining participation were workloads and the perceived importance of the study.

The most common reason indicated for GPs lack of participation in research was GP workload (Aitken et al., 2008, Deehan et al., 1997). GPs are time-poor, and as most research projects deliver less than equitable financial compensation for participation, finding time for participation is difficult (Aitken et al., 2008, Deehan et al., 1997). Thus, according to these theorists a primary reason for GPs lack of response to research initiatives was excessive workloads and poor compensation.

An alternate perspective for participation focuses on the importance the GP places on research in general and the specific research project (Fielding et al., 2005, Stocks and Gunnell, 2000). Stocks and colleagues (2004) found GPs who participated in research typically kept up to date with the latest research through medical journals and were engaged with the aims of the project and its potential benefits. For this group, financial compensation and workloads were not as high of a determinant.

Drawn from the qualitative phase of the research, it was evident that the GPs who participated were enticed by the values and potential benefits of the research aligning with the propositions of Stocks and colleagues (Stocks et al., 2004). With such a large number of non-respondents, however, it is essential that caution is taken when interpreting the data.

3.7.2 Common Method Variance

CMV, also known as common method bias, is ‘variance that is attributable to the measurement method rather than to the constructs the measures represent’ (Podsakoff et al., 2003, p. 879). It primarily occurs when data has been collected via a common method from a single source (Podsakoff and Organ, 1986). The common method and source of data collection can cause inaccurate representations of correlations among variables (Chang et al., 2010).

CMV was investigated using two tests, being the Harman single factor test and the MV approach (Lindell and Whitney, 2001, Rafferty and Griffin, 2006, Lindell and Brandt, 2000). The Harman single factor test is a statistical test to detect the presence and significance of CMV. More specifically it involves the loading of all items into a single factor to see if that single factor accounts for the majority of variance within the data. If the factor accounts for more than 50% of variance, CMV is considered an issue. Within this sample, the Harman’s single factor test was applied, with the single factor accounting for 22.79% of variance, suggesting that CMV was not considered a problem within the current study. Unfortunately Harman’s test is not sufficient to rule out CMV, so further investigation was needed (Podsakoff and Organ, 1986, Reio, 2010).

Additional testing was done using the MV approach. This approach entails the addition of a construct, the MV, which is theoretically unrelated to at least one other construct in the proposed model. During path analysis, the MV is inserted and is anticipated to have minimal correlations with most variables and a correlation of close to zero with at least one other. If these results are obtained, CMV is said not to have significantly influenced the results (Lindell and Brandt, 2000).

Similar to Rafferty and Griffin (2004), the MV chosen was bureaucracy (see Table 3.22). Bureaucracy is not significantly correlated with the majority of the constructs. Despite the noted associations between job demands and job resources, CMV did not significantly influence the quantitative data collected in this project because of the very low correlation with resilience, WFC and intention to quit.

Table 3.16: CMV Testing, Correlations with Bureaucracy (MV)

Construct	Path Coefficient	<i>t</i> -statistic	Significance
Burnout	0.11	1.72	N.S.
Job Demands	0.46	9.54	***
Job Resources	-0.20	3.36	***
Resilience	-0.02	0.28	N.S.
WFC	0.09	1.42	N.S.
Intention to Quit	0.10	1.66	N.S.

* $p < 0.05$ ** $p < 0.01$, *** $p < 0.001$,

3.7.3 Missing Data Analysis

The dataset was initially cleaned through the removal of all respondents who failed to record a response to six or more items. Following this, 42 respondents were removed from the dataset. To determine whether additional respondents with fewer than six missing items may have missed the items randomly, a Chi-square test was performed (Mason et al., 1999, Mason and Lind, 1993). This helped to determine if the missing data could be assumed as missing completely at random, in which case methods can be used to retain the record for further analysis (see Table 3.23).

Table 3.17: Missing Data Analysis

Construct	Fo	Fe	Fe x Items	Fo x Items
Resilience	26	6	156	5,590
Psychological Job Demands	9	6	54	1,935
Role Conflict	8	6	48	1,720
Job Control	22	6	132	4,730
Supervisory Support	5	6	30	1,075
Burnout	19	6	114	4,085
WFC	18	6	108	3,870
Intention to Quit	2	6	12	430
Bureaucracy	3	6	18	645

Fo: Items of the construct measure

Fe: Cases with missing data

Fe x Items: Cases with missing data multiplied by number of items

Fo x Items: Cases without missing data multiplied by number of items

Guided by Mason and Lind (1993), a Chi-square test was performed using the following formula to determine the differences between the respondents with and without missing data:

$$x^2 = \sum \left[\frac{(Fo x Items - Fe x Items)^2}{Fe x Items} \right]$$

$$x^2 = \frac{(5590 - 156)^2}{156} + \frac{(1935 - 54)^2}{54} + \frac{(1720 - 48)^2}{48} + \frac{(4730 - 132)^2}{132}$$

$$+ \frac{(1075 - 30)^2}{30} + \frac{(4085 - 114)^2}{114} + \frac{(3870 - 108)^2}{108}$$

$$+ \frac{(430 - 12)^2}{12} + \frac{(645 - 18)^2}{18}$$

$$x^2 = 189,284.33 + 65,521.5 + 58,241.33 + 160,163.67 + 36,430.83$$

$$+ 138,323.17 + 131,043 + 14,560.33 + 21,840.5$$

$$x^2 = 815,378.66$$

The result of the calculation was 815,378.66. With the associated 220 degrees of freedom, the result exceeds the critical value for a calculation; this indicates that the data cannot be assumed to be missing at random. Accordingly, the respondents with missing data were removed reducing the sample to 221.

3.7.4 Power Analysis

Guided by Green (1991), a power analysis (Cohen, 1988) was performed to determine the minimum sample size required to generate reliable findings. To achieve a minimum effect size of 0.8 ($\alpha = 0.05$), the minimum sample required was 97 respondents based on the current model's six predictor (or construct) structure. Therefore, the sample size was considered to be sufficient ($n=221$) for path analysis.

3.8 Ethical Considerations

Due to the potentially sensitive nature of the topics explored in this project, it was important to consider the associated ethical implications and identify appropriate management strategies (Mertens, 2005). The main implications included participant confidentiality, repercussions of disclosure of information,

psychological side effects of participation, data security and data integrity. Each is discussed in turn.

3.8.1 Participant Confidentiality

Participant confidentiality is important as confidentiality breaches could deter participation in this project. This is of particular concern when detailing conditions or behaviours with negative social perception (Stein et al., 2002); like burnout, WFC and an intention to quit.

Participant confidentiality was protected during the collection of quantitative data by anonymity of survey respondents. The methods of survey distribution purposefully limited the ability to re-identify participants. The initial method of distribution, through DGPs/MLs, included the respondent accessing an online version of the survey. Following completion participants were provided with the contact details of the primary researcher to request further information about the development and outcomes of the project. Participants who chose to provide their details were contacted under the specific terms agreed to on submission of the survey. The second method of distribution at the GCPE 2013, allowed participants to submit their anonymous surveys via a sealed box. Once again participants were offered the opportunity to provide their contact details for further information about the project. The final method involving AMPCo and UWS GP Supervisors was specifically chosen to recruit GPs at arm's length, meaning with limited involvement of the primary research team to maintain participant confidentiality. Both organisations were provided with a list of unique hyperlinks and issued one hyperlink to each potential participant via email. Once the hyperlink was accessed, it was automatically eliminated from subsequent follow-up procedures. At no time was the researcher in possession of participant details.

Participant confidentiality was protected by collecting broad demographic data. All demographic information collected was generic and included such items as age range, gender, marital status, number of dependent children, years in general practice, approximate number of patients seen per week and the specific DGP/ML affiliation if any. Participant confidentiality was maintained

due to the wide pool of potential participants, the details provided cannot be traced back to specific individuals.

Prior to the interviews the interviewees were provided with an information sheet with project details like how data would be managed and used. This confirmed that participation would be anonymous and confidential. Participants were all required to sign a consent form to verify their consent prior to participation. Participants were primarily referred to, in recordings, by their first name which again aids de-identifying the participant. All experiences detailed in this study have been de-identified to further protect confidentiality.

3.8.2 Psychological Side Effects of Participation

Due to the potentially sensitive nature of the research focus (e.g. burnout), it was possible that participants might become distressed (Lindeman et al., 1996, Dunwoodie and Auret, 2007). For this reason, details of free professional counselling and support programs were attached to the survey to enable participants to anonymously seek support if required. The survey itself used established scales that had been used in numerous studies thus ensuring the items were worded in a way that does not elicit significant negative ramifications for the individual.

Due to the depth of responses the interviewees were encouraged to share, it was essential that further measures be taken to protect these participants. The interviewees were re-supplied with contact details for free professional counselling and support programs, similar to the survey. If, by chance, the participant felt any negative emotions or consequences of participation the interview could be terminated at the request of the participant with no ramifications.

3.8.3 Repercussions of Disclosure of Information

At time of study, some members of the supervisory panel were also clinicians registered with the Australian health practitioner regulation agency (AHPRA). Health practitioners who are registered with this agency are legally required to notify the organisation of health practitioners who they believe have placed the public at risk of substantial harm due to an impairment or a digression from professional standards (Australian Health Practitioner Regulation Agency,

2010). To ensure informed consent, interviewees were advised of this obligation prior to the interview.

3.8.4 Data Security

The collection and storage of primary data collected was a vital consideration especially with the increasing importance on electronic data security (Nosek et al., 2002). The de-identified quantitative data was stored on three removable drives secured within a locked cabinet on a secure site. Raw data was only made available to the primary researcher. The transcripts and recordings of the qualitative information were stored in a similar fashion to the quantitative data. Multiple copies of the data were kept for back-up purposes and were never in the possession of a third party.

3.8.5 Data Integrity

To optimise data integrity, survey responses were primarily collected via an online platform – this helped to reduce data entry error. The manual entries of responses provided via paper-based surveys were double-checked to ensure accuracy.

The qualitative data was analysed in terms of the context in which it was received. This was optimised by the primary researcher's personal involvement in all stages of the collection, analysis and reporting of the data. To optimise data integrity, the analysis was reviewed by the primary supervisor who was present for most interviews. To optimise transparency all stages of data analysis were stored for future potential review.

3.9 Conclusion

The third chapter of this thesis has outlined the research methodology used in this project, including the ontological and epistemological positioning of the study. The chapter detailed the practical problems encountered throughout the study and how the research methodology and methods was developed to address emerging constraints. The methodology was devised to ensure the project has made a theoretical contribution to the literature in this area.

The chapter then summarised the mixed methods design used, with concentration on the five phases being; quantitative data collection,

quantitative data analysis, connecting quantitative and qualitative phases, qualitative data collection and the integration of the quantitative and qualitative results.

The chapter also outlined the processes undertaken to refine the reflective constructs, which primarily included the CFA and subsequent tests. Based on these procedures, the measurements were optimised to best suit their current use. Following this, preliminary testing prepared the dataset for sophisticated analysis. While there was the potential for non-response bias, CMV was not a significant issue. From an analysis of the missing data, these were not found to be random instances; therefore any respondents who failed to respond to an item were removed from the dataset.

This chapter concluded with a detailed discussion of the ethical issues related to this study. Through pre-identification, the research methods were tweaked to minimise potential ramifications of such a breach.

Following this chapter, the next chapter presents the quantitative and qualitative findings of the research. The chapter details the structural path analysis undertaken on the proposed model articulating similarities and discrepancies from the hypothesised relationships. The chapter also presents the results of the thematic analysis of the qualitative data collected.

Chapter 4: Results

4.1 Introduction

This chapter presents the quantitative and qualitative findings of the research. It commences by detailing the results of the structural path analysis. It then presents the findings from the analysis of the qualitative data. The chapter concludes with the interpretations and analyses of the interviewees' experiences relating to the proposed hypotheses.

4.2 Data Analysis

The hypothesised model, designed to assess the association of resilience, burnout and intention to quit the profession, is comprised of both formative and reflective constructs as identified in section 3.4.1.2. AMOS v.21 was used to perform a CFA on the reflective constructs as detailed in section 3.6.1 to further optimise these measurements. The model and the relationships therein were analysed using the SEM program, SmartPLS (Ringle et al., 2005). The significance of the path relationships between the constructs was determined through using the bootstrapping procedure (500 subsamples) (Ringle et al., 2005, Gotz et al., 2010) as guided by Temme and colleagues (2010). Bootstrapping is a resampling technique commonly used in SEM where additional samples are generated based on data trends (Tenenhaus et al., 2005, Hair et al., 1998) to illuminate the relationships between the constructs.

4.2.1 Descriptive Statistics

The GPs involved in the study represented moderate levels of job demands, with a considerable portion (26%) experiencing high psychological job demands (See Table 4.1). The levels of role conflict present within the current sample were lower with the majority of GPs experiencing moderate to low levels of role conflict (65.1%). The lack of role conflict can be explained by the significant level of GPs reportedly having 'no supervisor' (64.2%).

The participants in this study were relatively unhampered by WFC, with 81.9% reporting low to moderate levels of conflict, with only 0.9% reporting extreme levels of WFC. The GPs were quite resilient, with a large majority reporting

moderate to high levels of resilience (84.2%). Due to these factors, an intention to quit within the sample was lower than expected, with only 11.63% of GPs intending to quit.

Table 4.1: Descriptive Statistics

Construct	Mean	Median	Mode	SD	Min	Max
Job Control	3.35	3.36	3.14	0.65	1.55	4.77
Supervisory Support	1.05	0	0	1.49	0	4
Psychological Job Demands	25.37	26	27	5.21	11	36
Role Conflict	27.15	27	19	11.77	8	56
Resilience	5.58	5.73	5.82	0.91	1	7
Work-Family Conflict	42.27	44	48	13.23	18	80
Burnout	2.85	2.92	3.38	0.93	1	4.69
Intention to Quit	2.60	2	1	1.84	1	7

4.2.2 Inter-Construct Correlations

Table 4.2 presents the reliability measures and the inter-construct correlations. Burnout, resilience and intention to quit are all above the commonly accepted 0.7 threshold (Sridharan et al., 2012, Raykov, 1998), signifying a high degree of internal reliability. Unfortunately job resources composite reliability is unsubstantiated.

Table 4.2 presents several key inter-construct correlations within this study. Burnout is significantly and positively related to job demands, WFC and intention to quit. Job resources is significantly negatively related to job demands, suggesting an increase in job resources is correlated with decreased levels of job demands. Job resources are also positively and significantly related to resilience. Furthermore, WFC is positively and significantly correlated to job demands.

Table 4.2: Inter-Construct Correlations and Reliability Measures ($n=221$)

Communality	R Square	Composite Reliability	AVE	Correlations among Constructs							
					1	2	3	4	5	6	
0.82	0.51	0.94	0.82	1. Burnout	1						
0.77	0.13	N.A.	N.A.	2. Job Demands	0.55	1					
0.55	0	N.A.	N.A.	3. Job Resources	-0.41	-0.37	1				
0.89	0.13	0.94	0.89	4. Resilience	-0.17	0.04	0.33	1			
0.41	0.43	N.A.	N.A.	5. WFC	0.68	0.61	-0.40	-0.19	1		
0.89	0.51	0.94	0.89	6. Intention to Quit	0.51	0.38	-0.36	-0.16	0.49	1	

Note: Correlations ≥ 0.2 low significance and those ≥ 0.35 are highly significant. AVE = Average Variance Extracted

4.3 Structural Model

The analysis of the structural model, developed to represent the hypotheses detailed in chapter two, is comprised of two primary steps – namely, an analysis of the structural equation model and hypothesis testing. To determine the strength of the model, the strength of the relationships between constructs and the variance explained were analysed through the use of SmartPLS (Ringle et al., 2005). Additionally, the goodness of fit was examined. Following this, a bootstrapped version of the model was analysed, helping to determine the significance of the path correlations.

4.3.1 Results of the Structural Equation Model

The structural model was examined by estimating path coefficients between the constructs of the model and the coefficient of determination (R^2) value of the reflective variables. Path coefficients indicate the strength of the relationship between the constructs. The R^2 represents the amount of variance within the model explained by the construct. A goodness of fit (GoF) test was also performed.

4.3.2 Strength of Construct Relationships

Guided by Ringle and colleagues (2005), the significance of the partial least squared (PLS) parameter estimates were assessed through using the ‘Bootstrapping’ option of SmartPLS. Bootstrapping is commonly used to provide extra confidence in model estimation by using repeated random samples drawn from the data (Gotz et al., 2010, Nfuka and Rusu, 2011, Hair et al., 1998). Following the works of Ringle and colleagues, the bootstrap procedure was repeated until 500 bootstrap resamples existed.

Through the use of SmartPLS, the analysis identified several key findings (see Table 4.3). Based on the current sample, job resources are negatively associated with job demands ($\beta=-0.37$, t -statistic=5.36, $p<0.001$) and burnout ($\beta=-0.11$, t -statistic=2.06, $p<0.05$). In addition job resources was negatively associated with WFC ($\beta=-0.15$, t -statistic=1.97, $p<0.05$). Job demands are positively associated to burnout ($\beta=0.20$, t -statistic=2.91, $p<0.01$) and WFC ($\beta=0.56$, t -statistic=11.15, $p<0.001$). Job resources were positively related to

resilience ($\beta=0.39$, t -statistic=5.23, $p<0.01$), with resilience being negatively associated with WFC ($\beta=-0.16$, t -statistic=2.84, $p<0.01$). The analysis also showed that WFC was significantly related to burnout ($\beta=0.51$, t -statistic=8.09, $p<0.001$). As anticipated, a significant relationship exists between burnout and an intention to quit ($\beta=0.51$, t -statistic=10.61, $p<0.001$).

Through SEM, sufficient support was identified to confirm hypothesis 1, hypothesis 2, hypothesis 3, hypothesis 4, hypothesis 5, hypothesis 7, hypothesis 8, hypothesis 10, and hypothesis 11. However the current model did not confirm support for hypothesis 6, and hypothesis 9 (see Table 4.3 and Figure 4.1).

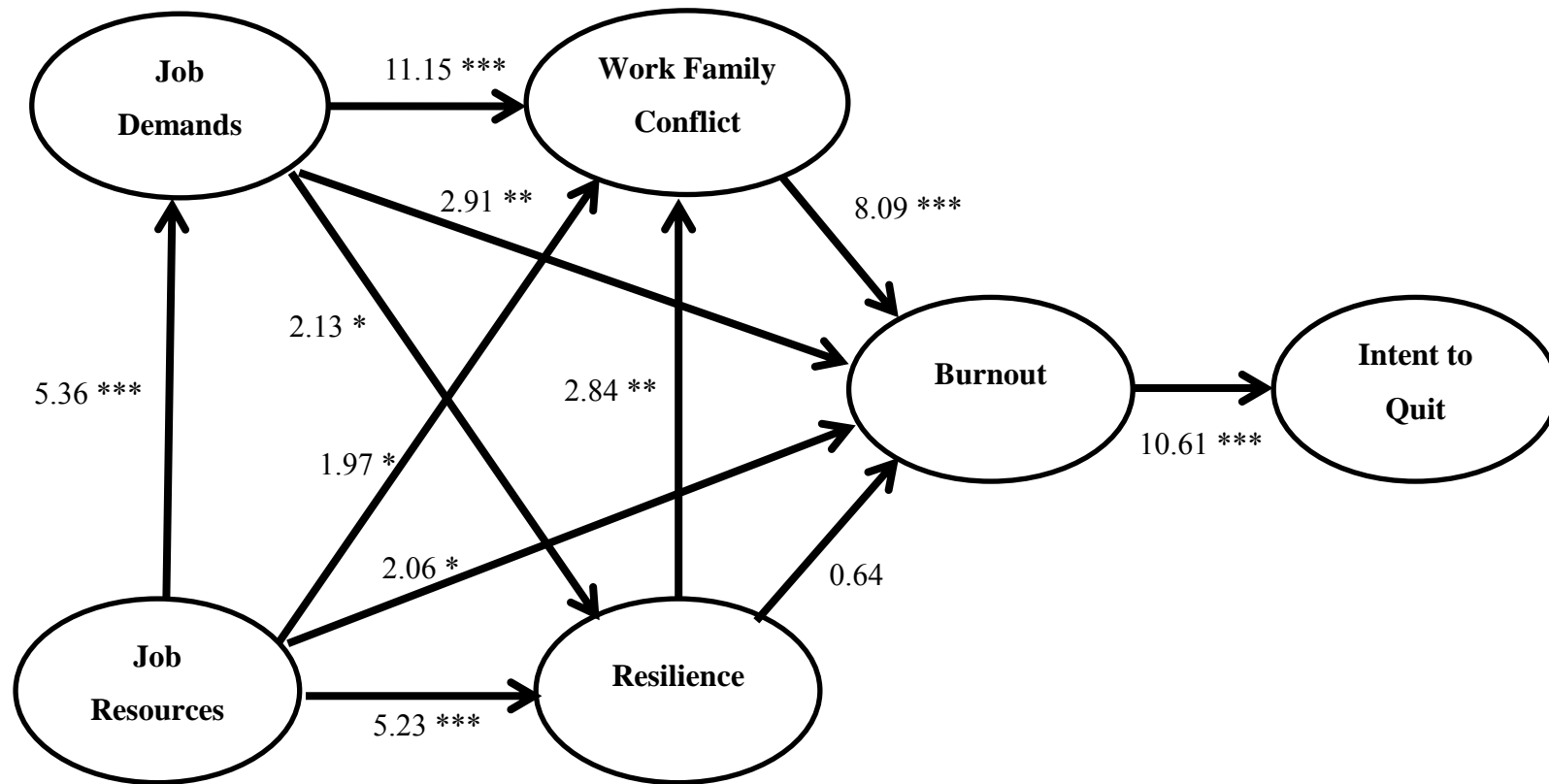
Table 4.3: Relationships between Research Concepts

Paths	Sample	Mean	SD	Standard Error	t-statistic	Sig. level	Hypothesis
H1: Job Resources→ Job Demands	-0.37	-0.37	0.07	0.07	5.36	***	Supported
H2: Job Demands→ Burnout	0.20	0.19	0.07	0.07	2.91	**	Supported
H3: Job Resources→ Burnout	-0.11	-0.11	0.06	0.06	2.06	*	Supported
H4: Job Demands→ WFC	0.56	0.56	0.05	0.05	11.15	***	Supported
H5: Job Resources→ WFC	-0.15	-0.15	0.07	0.07	1.97	*	Supported
H6: Job Demands→ Resilience	0.18	0.17	0.08	0.08	2.13	*	Not Supported ¹
H7: Job Resources→ Resilience	0.39	0.39	0.07	0.07	5.23	**	Supported
H8: Resilience→ WFC	-0.16	-0.16	0.06	0.06	2.84	**	Supported
H9: Resilience→ Burnout	-0.04	-0.04	0.07	0.07	0.64	n.s.	Not Supported
H10: WFC→ Burnout	0.51	0.52	0.06	0.06	8.09	***	Supported
H11: Burnout→ ITQ	0.51	0.52	0.05	0.05	10.61	***	Supported

n.s. = Non Significant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

¹ Although this value is significant, it differs in direction to the original hypothesis. See section 5.3.6

Figure 4.1: Results of Assessment for the Significance of PLS Parameter Estimates.



* p<0.05, ** p<0.01, *** p<0.001

4.3.3 Variance Explained (R²)

The results for the structural path analysis are presented in Table 4.2 and Figure 4.1. The path coefficients show the significant influence of job demands on resilience, burnout and WFC. Job demands were associated with burnout, explaining 51% (R²=0.51) of variance, as well as WFC explaining 43% (R²=0.43) of variance. Job resources were negatively related to job demands explaining 13% (R²=0.13) of variance, burnout explaining 51% (R²=0.51) of variance and WFC explaining 43% (R²=0.43) of variance. Job demands were also positively related to resilience, explaining 13% (R²=0.13) of variance. WFC was associated with burnout, explaining 51% (R²=0.51) of variance. Burnout was positively related to intention to quit, explaining 51% (R²=0.51) of variance.

4.3.4 Goodness of Fit (GoF) Test

According to Mason and colleagues (1993), GoF tests are widely used to account for the performance of the path model. Tenenhaus and colleagues (2005) proposed a criterion for GoF index. The index is obtained by calculating a geometric mean of the average communality index and average R² value:

$$GoF = \sqrt{(Avg\ Communality) \times (Avg\ R^2)}$$

Based on the communality and R² values identified earlier as per Ringle and colleagues (2005), the average communality was calculated as 0.7573, with the average R² value being 0.29416. Thus:

$$\begin{aligned} GoF &= \sqrt{0.7573 \times 0.29416} \\ &= 0.471982 \end{aligned}$$

According to Wetzels and colleagues (2009), a GoF index in excess of 0.36 indicates a high GoF. As such, the GoF calculated (0.47) is indicative of a high level of GoF.

4.4 Hypothesis Testing and Findings

Hypothesis testing was performed through SmartPLS (Ringle et al., 2005), using the final dataset ($n=221$) after deletion of records containing missing data. SmartPLS was used to calculate the path coefficient and t -statistic of the path

correlations which in themselves are representative of the proposed hypotheses (see Table 4.4).

Table 4.4: Hypothesis Testing

Path	Path coefficient	<i>t</i> -statistic	Sig. Level	Hypotheses
H1: Job resources→ Job demands	-0.37	5.36	***	Supported
H2: Job demands→ Burnout	0.20	2.91	**	Supported
H3: Job resources→ Burnout	-0.11	2.06	*	Supported
H4: Job demands → WFC	0.56	11.15	***	Supported
H5: Job resources → WFC	-0.15	1.97	*	Supported
H6: Job demands → Resilience	0.18	2.13	*	Not Supported
H7: Job resources → Resilience	0.39	5.23	**	Supported
H8: Resilience → WFC	-0.16	2.84	**	Supported
H9: Resilience → Burnout	-0.04	0.64	n.s.	Not Supported
H10: WFC → Burnout	0.51	8.09	***	Supported
H11: Burnout → Intention to quit	0.51	10.61	***	Supported

n.s. = Not Significant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.4.1 Effects of Job Resources

Job resources have a significant negative relationship with job demands (coefficient=-0.37, t -statistic=5.36, $p < 0.001$), thus supporting hypothesis 1. As such, GPs who receive or perceive high levels of job resources experience lower levels of job demands. As job resources alleviate the impact of job demands, this high correlation was expected. Job resources are negatively associated with burnout (coefficient=-0.11, t -statistic=2.06, $p < 0.05$), thus supporting hypothesis 3. Therefore GPs with high levels of job resources experience lower levels of burnout. In addition, job resources are also negatively associated with levels of WFC (coefficient=-0.15, t -statistic=5.36, $p < 0.05$), thus supporting hypothesis 5, indicative of individuals with higher levels of job resources being exposed to lower levels of WFC. Job resources were also positively associated to resilience, as proposed through hypothesis 7 (coefficient=0.39, t -statistic=5.23, $p < 0.001$).

4.4.2 Effects of Job Demands

As expected, job demands are strongly correlated with burnout and WFC. As shown in Table 4.4, job demands was positively related to burnout (coefficient=0.20, t -statistic=2.91, $p < 0.01$) as hypothesised (hypothesis 2). In accordance with hypothesis 4, job demands were positively related to WFC (coefficient=0.56, t -statistic=11.15, $p < 0.001$). Contrary to hypothesis 6, a significant positive correlation was found between job demands and resilience (coefficient=0.18, t -statistic=5.23, $p < 0.01$). This finding suggests that individuals

experiencing high levels of job demands also have high levels of resilience. This finding is further discussed in section 5.3.6.

4.4.3 Effects of Resilience

As hypothesised resilience was negatively related to WFC (coefficient=-0.16, t -statistic=2.84, $p<0.01$). Although job resources was positively related to resilience (coefficient=0.39, t -statistic=5.23, $p<0.001$), there was insufficient evidence to support the hypotheses that resilience was associated with burnout (hypothesis 9). As such the unexpected findings suggest that resilience had little impact on levels of WFC, however through bolstering job resources, resilience indirectly lessened these factors.

4.4.4 Effects of Work-Family Conflict

As hypothesised (hypothesis 10), WFC was strongly associated with burnout (coefficient=0.51, t -statistic=8.09, $p<0.001$). As a result of competing pressures between the work-family environments, the likelihood for the generation of burnout is increased.

4.4.5 Effects of Burnout

As anticipated (hypothesis 11), burnout was associated with intention to quit general practice (coefficient=0.51, t -statistic=10.61, $p<0.001$). Due to burnout, GPs no longer see adequate rewards in general practice and take actions to minimise the intensity of the demands placed on them.

4.5 Qualitative Data Analysis

The following section presents findings from a deductive thematic analysis of the qualitative data. The themes were specifically targeted to follow those of the quantitative approach; job resources, job demands, WFC, resilience, burnout and intention to quit. The thematic analysis will illuminate the coherent complexities of general practice that may have otherwise been obscured by the model.

4.5.1 Job Resources

According to the interviewees, job resources include collegial support, job control, flexible working conditions, capacity to customise work tasks and supervisory support. Each is discussed in turn.

4.5.1.1 Collegial Support

Collegial support was conceptualised to include formal and informal support from fellow doctors or practice staff as well as support gained through professional networks. Collegial support was said to help GPs to develop resilience and practice effectively. The interviewees suggested that resilience could be enhanced by increased collegial support, as well as high levels of supervisory support. All of the aspects of job resources listed above are associated with increased resilience.

The formation of support networks within the practice enables GPs to practice at their maximum capacity with less negative side effects. One experienced GP clearly notes the importance he places on workplace support;

Being connected is very important. It is very easy for some GPs to become isolated, less so now with less solo practitioners, but that professional isolation [is a problem] (GP 1, male).

Similarly a female GP spoke of the benefits of GP interactions. As she recounts, ‘We all help covering for one another’ providing insight into the fact that through forming social connections with the practice members, a sense of togetherness is created whereby co-workers share the loads and demands of general practice. This GP clarified her view, stating, ‘I think building a practice community is a really important thing’. This supportive practice community enabled the GPs within to

bounce back from stressful situations due to the increased support of colleagues. By building a healthy practice community, further opportunities for knowledge sharing are created.

Within a supportive community, GPs can share knowledge, enhancing their professional development opportunities. An experienced GP recounted how he gained alternative perspectives on patient consultations and treatment methods by sharing experiences with other GPs while walking down the ‘corridor or chatting over lunch, or actually sitting down and asking questions.’ This GP suggested he has developed a practice-style shaped by the perspectives and experiences of fellow GPs, enabling him to deliver better primary care.

Interviewees found benefit in discussing patient experiences, illnesses and concerns with peers to confirm their professional practices. After challenging patient consultations, some indicated that they sought support from colleagues to vent and debrief. This was particularly the case after attempting to navigate the health system and advocate for a patient with particular health needs. The opportunity to debrief promotes increased GP wellbeing and their capacity to continue practicing:

Collegial support is vital... you might be just down the corridor and say, ‘Oh my God, I need a debrief. I just had the most terrible consultation’. You can debrief with a lot of colleagues... collegial support is very important (GP 2, female).

You look to seek support, not necessarily for your point of view or your standpoint, but again another sort of reflective exercise to see if there is something someone else would do in a different way that you may be able to use for your own purposes (GP 1, male).

Colleagues represent an important psychosocial resource, supporting the interviewees through difficult situations and providing friendly informal advice to better manage the challenges of general practice.

Collegial support was also sourced from colleagues who were not GPs. Some interviewees suggested that Practice Nurses and administrative staff shielded them

from workplace stress. For instance, the former performed vaccinations and wound-dressings, and provided patients with follow-up support. These practices in turn lessened the responsibilities of the GPs, affording them greater time for patient consultations:

The Practice Nurse does a fair bit of stuff where otherwise we would have to answer those calls or do those tasks (GP 10, female).

Similarly, administrative staff can also reduce GP workload. Often the forgotten link in general practice, the administrative staff have the ability to shield GPs from potential stressors by managing patient bookings and walk-ins. According to some interviewees from larger practices, they had the opportunity to ‘semi-specialise’, often being allocated patients relating to their particular interest area (e.g. Paediatrics, Mental Health etc). The interviewees recounted receiving higher satisfaction from treating those patients. Conversely some clinical situations can be taxing for GPs. This ability to filter patients minimised the impact of patient demands on the interviewees, with the potential beneficial influence only growing with further empowerment of the administrative staff:

We have fantastic receptionists who know us very well and probably protect us a fair bit (GP 10, female).

The staff at the front desk have the authority to make decisions themselves, and they are reasonably well supported by the doctors, myself included... The administrative people don’t get up my nose whereas at one place I worked I just couldn’t cope anymore (GP 8, male).

These excerpts demonstrate the role of non-GP colleagues in minimising the experience of GP stress and the potential for burnout. Administrative staff with some discretionary power enable GPs to attend clinical work, with limited interference from other demands. For instance an experienced female GP spoke of the informal support networks between the doctors, reception staff and practice nurses. In this practice, the three groups unite to ‘cover for each other’ sharing tasks and ultimately reducing GP strain. Through such support the interviewees

suggested they were supported by practice staff, and therefore able to sustain their clinical practice, devoting adequate time to each patient.

Some interviewees used online forums to air grievances primarily related to non-patient specific stressors like paperwork and changes in relevant legislation. Due to the anonymous nature of the internet, some interviewees suggested they were able to vent grievances and concerns to similarly minded individuals. Through this form of debriefing interviewees acknowledged the possibility for change is relatively low, yet they gained a sense of peace, knowing their experiences and frustrations were shared:

Complaining in online forums is useful or therapeutic at least (GP 8, male).

Some interviewees opted to join general practice or clinical interest groups such as Balint Groups. Balint Groups are where a range of different medical professionals meet to discuss past cases, many of which have had elicited strong emotions from the presenting clinicians, to further explore the interactions between the patient and the clinician (Balint Society of Australia & New Zealand, 2013). GPs are officially encouraged to attend such groups with the granting of continual professional development (CPD) points. By participating in such groups, the interviewees indicated they gained support and aired practice-related grievances to a knowledgeable group from which they received help or advice to improve their capacity to remain in general practice:

I joined a Balint group where I have the opportunity to discuss the effect of working in stressful situations with other GPs (GP 6, male).

For some, discussing their feelings and experiences with fellow medical practitioners, with alternate views was helpful. These interviewees reported that they were able to shed more light on current issues facing clinicians as well as get practical support on how to better handle these issues in the future.

4.5.1.2 Job Control

Interviewees spoke of two primary forms of job control - the ability to control work hours and a sense of professional competence. The work structure of GPs differs from most workers. Many are principals of a practice or contracted by an

employer allowing the individual greater control over their work hours. According to the interviewees, this provides two advantages – it enables the interviewees control over hours worked and practice style, thus minimising their demands. By controlling work hours, the interviewees could schedule their days in a way that allowed sufficient time and energy to be devoted to family responsibilities. One interviewee structured her hours to work between 9 a.m.-2 p.m. to allow her to walk her children to school, and as such fulfil non-work-related matters. Control also allowed the interviewees to practice in a way that suits their own principles and beliefs regarding general practice:

I like being able to make my own rules, I like being able to work the hours that I want to work. I like to be able to practice in the way I would like to practice (GP 6, male).

Throughout their practice experience, the interviewees became more confident in clinical competence, adding a sense of control over their work. Within the interviewees, feelings of competence lessened the impact of the demands of general practice:

I'm 57, I have been in general practice for thirty years and most things you can sort out or you know a way out of it. But if I was starting this from scratch, I might say something totally different (GP 9, female).

This experience illustrated that professional confidence generated over time as the interviewees became more comfortable with patient consultations. As professional competence increased, the interviewees were able to offset the potential ramifications of practice-related uncertainty.

An aspect of professional competence is managing patient demands. Some interviewees described a range of strategies to do this through their limiting of conditions addressed per consultation, cognitively distancing themselves from their patients' conditions and reflecting on patient interactions for future development. These helped to diminish fatigue from patient consultations, prolonging the interviewee's capacity to practice effectively:

I do manage patient demands reasonably well and I think I'm tougher than a lot of other doctors. I recognise it for

my own mental health; I don't tolerate a lot [from patients] (GP 9, female).

According to the interviewees, the strategies aided self-protection from unreasonable patient demands. This in turn enabled the interviewees to continue practicing despite the demands placed on them.

4.5.1.3 Flexible Working Conditions

Due to the nature of GP work, there is considerable flexibility in the work schedule. For many interviewees, this provided a sense of security, particularly during times of personal illness or misadventure. For instance, one interviewee described the assurance she felt given her flexible workplace, while she experienced severe health concerns. The interviewee appreciated the flexibility shown by the practice principal enabling the interviewee to recover without the uncertainty of future employment:

When I was 27, I had a back surgery and had to lie down for three months and again they were happy for me to at one stage work standing up from a pulpit because I couldn't sit down. The flexibility is amazing (GP 4, female).

Such flexibility reflects effective working relationships. By customising work conditions to suit the interviewee's situation, she felt important within the practice and was dedicated to her practice and her profession.

Flexible working conditions can also help to prevent WFC. Increased levels of flexibility can help to form and maintain boundaries between work and family domains, and therefore avert WFC. One senior female interviewee was able to draw a clear distinction between her work life and her home life, despite practicing from her home office for two days per week:

I am very good on boundaries, so I pretty much only have my professional hat on when I'm professionally working and try to keep the friends' stuff separate. (GP 4, female).

This shows that cognitively separating the work and family environments can help to maintain WLB. What is particularly interesting about this case is that although

there was no geographical separation between work and home, the work of the interviewee seemed uncompromised by the overlap.

4.5.1.4 Work Customisation

The ability to customise their workspace was beneficial for several interviewees. By customising their physical surrounds, they indicated they experienced benefits in terms of reduced the impact of practice-related stress. The Interviewees cited three primary reasons for this namely, cognitive respite by appreciating their chosen artworks or room layout; familiarity with positioning of resources and medical equipment; as well as sharing their personal values through general practice. By personalising their clinic room layouts and artwork, some interviewees influenced the atmosphere of the room to better suit their consultation style; enabling the interviewees to remain positive in spite of the demands they face:

So my room has cream and turquoise walls with a purple stripe while all the others are grey, and so I have pictures on the walls and bright things in there as well. It's more like a lounge room rather than a consulting room, so that helps. I think if it was just a grey room I would find that quite depressing (GP 4, female).

Another interviewee found comfort in a dedicated personalised workspace. It afforded her a sense of control and the opportunity to arrange the room in a way that was conducive to efficient practices:

When I come in it is there for me to use, it is there for my purpose ahead of everyone else's. That's important because I can find stuff, I know where it is. It is also a sense of at homeliness there (GP 9, female).

Workplace customisation also allowed the interviewees to share something of themselves with their patients. According to one interviewee, this encouraged the development of doctor/patient relations and heightens doctor satisfaction:

I guess I have chosen the artwork in my room, which reflects some of my personality and also indicates some of the things that are of value to me, so there is a bible verse

on the wall that says ‘Therefore take heart cause these are light and momentary troubles, that is far outweighed by the glory that’s coming.’ So people often comment on that. And I got someone to calligraphy that so it’s beautiful ... My patients often comment on what a nice calm place it is (GP 4, female).

The ability to customise their workspace, to increase the efficiency and achieve greater continuity with their personal practice style, led these interviewees to experience greater satisfaction at work. However, those who were given this privilege typically had an effective working relationship with their practice principal, which would also contribute to the high sense of accomplishment.

4.5.1.5 Supervisory Support

As general practice operates on a fee for service arrangement, some interviewees have felt pressure from their GP principals to increase the number of consultations undertaken. Some interviewees, who are currently GP principals, cite shielding themselves from these pressures as one of the main drivers behind opening their own practice. GP principals who experienced such pressure in the past are more likely to introduce practice-wide policies to shield future GPs from experiencing similar demands. One principal GP is very mindful of this and has introduced;

[We have] official policies in how we manage appointments, how we manage new patients, how often they are booked in, are we seeing new patients. Making sure we don’t overbook (GP 10, female).

By establishing supportive policies, GPs within the practice can practice within their own constraints:

The culture of the practice would help. If you work somewhere that you had to see six patients an hour and you had to sort of make sure you saw as many patients as you could, I don’t think I would cope very well with that (GP 6, male).

Some interviewees have mentioned that a supportive GP principal allows GP colleagues the time to recover from stressful consultations. On the other hand, if

the principal did not portray these attitudes, the interviewees would have little time to unwind between consultations, hindering their clinical capacity.

4.5.2 Job Demands

Some interviewees highlighted the job demands they encountered during their practice experience. These included patient demands, high workload, bureaucracy, new medical practices, practice instability, and leadership/owner demands; each is addressed in turn.

4.5.2.1 Patient Demands

According to the interviewees, patient demands include unreasonable expectations of doctors, and patient illnesses and experiences. Although they can both diminish GP wellbeing, this is particularly the case among junior doctors. As one interviewee observed:

Over the years, during my time at the practice, as a GP supervisor, you do see how stressful it can certainly be to some GPs. Especially to young GPs who come in and are not kind of used to it (GP 2, female).

Through experience and professional maturity the interviewees developed strategies and practices to shield themselves from patient demands. These helped them to continue practicing:

So if you have the strategies or approaches and skills you will be able to work your way through most situations (GP 9, female)

According to the interviewees patients often had unrealistic expectations about appointment scheduling and the ability for GPs to address multiple issues within short appointment times. Most interviewees were affiliated with practices that booked patient appointments. For some cases, this meant considerable waiting times, which did not always sit well in primary care. Some interviewees noted that, for patients with mental health issues consultation length could be unpredictable:

[When patients are] quite distraught and distressed I will usually spend more than 15 mins with them (GP 4, female).

We don't have 15 minute medicine; we tend to take as long as it takes to get the problem solved. That can be very difficult when we have a waiting room of people who have been waiting for an hour when a patient has told everyone, 'I won't be long I'm just going in to have my form signed.' The flow on effect can mean you are very late (GP 3, female).

When patients needed more time than was allocated, flow on delays were unavoidable, much to the dismay of interviewees and their patients:

So just constantly working with a waiting room full of patients and feeling like you need to give a good time to each person, but at the same time, being aware that there are people waiting, and possibly getting annoyed outside (GP 3, male).

Some interviewees indicated that the primary reasons for patient delays were medical emergencies, unsatisfactory scheduling of appointments, and excessive paperwork. Although these factors were beyond the control of the interviewees, they felt responsible for the delays caused to patient appointments:

Occasionally it's because of emergencies, but mostly it's because of appointments going over time (GP 4, female).

The paperwork, has been an escalating thing over twenty to thirty years (GP 7, male).

There's an unending stream of paperwork, reports to write, results to review, there are referrals, there's all sorts of things (GP 6, male).

Other interviewees recounted that due to the difficulty of getting access to a GP, when patients have a consultation they stretch the appointment to cover several

issues which leads to further delays. Over time the interviewees have learnt to limit the amount of time dedicated to each patient:

[Patients] will often come in with big lists of problems, which is ok, but often just trying to deal with that in 15 minutes and sometimes having to communicate to people that that is just not possible I find difficult (GP 9, female).

Not only were the interviewees strained by a full waiting room of patients, but they also had to communicate the need for efficiency with the patient they consulted. In some cases, however, consultations were unexpectedly extended when health issues were raised by a patient including mental health issues. One experienced GP with a particular interest in mental health recounted the need to extend the consultation based on the composure of the patient. When the patient appeared to be unwell, the consultation had to be continued until the interviewee was satisfied that the patient had reached a state of stability. This in turn incited frustration among other patients who were waiting for their scheduled appointment.

Other interviewees recounted instances where delivering information about more severe conditions inflicted a toll on their emotional wellbeing:

It is never easy to tell a patient that the lump they had checked out is breast cancer (GP 10, female).

The serious nature of this diagnosis made delivering the news difficult with ramifications for the psychological state of the GP. Disclosure from the patient to the doctor can also be difficult to handle, as one interviewee recounted:

If it is somebody who has disclosed something to me that I find hard to hear, for example childhood sexual abuse or something like that, I know that is stressful for me (GP 10, female).

In this instance the interviewee was not only concerned about the disclosure of the abuse, but also the potential ramifications that the patient may be experiencing as a result of such events.

4.5.2.2 Workload

Interviewees suggested that workload increased due to certain organisational practices – like the decision to bulk bill patient consultations. Bulk billing occurs when the practice bills Medicare directly, rather than the patient, for any medical service the patient receives (Medicare Australia, 2013). Although this makes healthcare more accessible to patients, it can also increase GP workload, particularly in poorer communities. As two interviewees indicated:

Up until about July 2000, when we stopped fully bulk-billing, there was a much bigger pressure on numbers of patients because there were lots and lots of patients wanting to be seen. So we would always be squashing in extra patients. But when we changed to charging a fee and having a more formal appointment schedule it became less pressured (GP 6, male).

We are not a bulk billing practice so that filters out a lot of patients (GP 8, male).

Interviewees who were principal GPs had especially high workloads. They were responsible for most management-related decisions in addition to maintaining their own patient-load. Given their role, these interviewees were required to prioritise work at the expense of their own personal health and family. They often compromised the time they allowed themselves for healing from ill health. By prematurely returning to work, they sometimes compromised their capacity to adequately fill their role – this created more stress. One female interviewee who was a principal GP, recounted when she returned to work due to the practice needs, following a health condition:

I had an operation and took a week off work and then went back to work as he [fellow principal] wasn't coping (GP 9, female).

4.5.2.3 Bureaucratic Demands

Some interviewees indicated that the level of paperwork and bureaucracy involved with general practice was a major job demand. The interviewees were

frustrated with the level of bureaucracy present as it was time consuming, and diminished patient consultation time:

I didn't go into general practice to be a paper pusher and to fill out forms (GP 6, male).

We need to jump through a lot more hoops to get things that we recognise are helpful for people (GP 10, female).

It [the paperwork] is an absolute nightmare to deal with (GP 8, male).

Some interviewees were concerned about the amount and complexity of the paperwork they were required to complete regarding issues arising during their consultations. Some more experienced GPs remarked that the level of bureaucratic procedures they were subjected to has only risen over time, adding further complexity to the consultation:

The paperwork, has been an escalating thing over twenty to thirty years ... the amount of paperwork has become quite significant (GP 7, male).

I guess not just your ordinary ones (the paperwork), but once you are looking at mobility parking and that kind of thing, that gets a bit complex (GP 4, female).

Other interviewees felt they had not received adequate training or guidelines, in terms of the establishment of new or the rearrangement of various Government schemes. One experienced interviewee recounted the frustration he felt when he had wasted time completing forms that were obsolete:

You give them a form and they go to the council and the council say that your doctor hasn't filled it out incorrectly, you're not eligible ... We aren't trained to make these sorts of clerical decisions (GP6, male).

According to the interviewees, government demands had implications for securing healthcare for the patient, which in turn placed more pressure on the interviewees. To secure healthcare for patients, the interviewees described the need to complete various forms and follow protocols. When these were complicated, the

interviewees became distressed, cognisant that their patient received suboptimum care in the interim. Subsequently, the interviewees grew increasingly dissatisfied with these patient consultations:

Another patient...has post-traumatic stress disorder and is quite a disturbed woman. She had a good therapeutic relationship with a mental health team. She was involved in a siege where she was taken hostage by a drug affected neighbour. Therefore she decided to change house ... but that therefore meant she changed area. She was no longer able to go see that mental health team even though she was only one suburb away. That has caused an enormous schism in her care that's for sure. As a general practitioner, it is hard because you are trying to draw everything together and help a patient navigate the system and when it seems ridiculous you seem both responsible and angry yourself and sad because of what it has done to people (GP 2, female).

We need to jump through a lot more hoops to get things that we recognise are helpful for people (GP 10, female).

Some interviewees indicated that the key reason for these delays was to ration limited Government-funded resources, by only funding the treatment of patients with the most urgent healthcare needs. However the interviewees believed they did not have adequate time to follow such procedures due to their existing demands:

If you just look at it on the surface a GP sees all these multitudes of different services, all vying for amounts of government and non-government money, how do they know where to go? How do they choose between these different services? That is confusing for doctors too and causes doctors some stress (GP 7, male)

Although the interviewees recognised a need to use limited public funds efficiently, it was difficult for them to manage requirements associated with the accountability mechanisms.

The implications of the extensive bureaucracy also diminished the wellbeing of the interviewees. For instance one interviewee indicated that largely because of bureaucratic demands, he contemplated self-harm and attempted suicide. Although the interviewee has since received treatment, he still faces considerable bureaucracy in general practice. The Medical Board of Australia required the interviewee to be regularly drug tested to ensure professional competence and suitability for practice. However this compromised his availability to practice and was also a great personal financial burden. Additionally he was perceived by the “Board as a ‘druggo’”. Although the interviewee was permitted to practice, his licence was restricted, prohibiting him from prescribing and/or administering drugs of dependence:

The requirements of the medical board persists ... as well as the drugs of dependence, which is a state Act, (they) also effects my ability and how I can practice. I have restrictions on my licence (GP 8, male).

Partly due to the demands of general practice this individual attempted to commit suicide. Immediately after the event, the GP was in an extremely fragile mental state which was further exacerbated by the persistent demands of the Board. This experience reveals how bureaucracy contributes to workplace demands, both before and after episodes of poor wellbeing.

4.5.2.4 New Diagnostic Equipment

Some interviewees articulated that the advancements in healthcare related technologies have added increased complexity to their role. The problem being that the onus of keeping up to date on the most appropriate diagnosis or treatment methods unsettled some interviewees:

[There] is just a vast number of diagnostic options that we have now that we didn't have before. So there are many more tests that you have to remember, and many more treatment options. New types of medications and

operations, there's more things to keep on top of (GP 3, male).

The interviewees were concerned with the ramifications of providing incorrect advice, or inappropriate diagnostic methods due to the possible implications for patient recovery and potential legal or disciplinary investigations.

4.5.2.5 Leadership

Those interviewees who assumed the role of a principal GP appeared to experience additional challenges. These included staffing issues and regulatory concerns. These interviewees also maintained their own patient loads, which exacerbated their job demands.

For some interviewees, who were also GP principals, the responsibility of allocating and managing staff proved challenging. One interviewee recounts the discomfort she felt when she 'had to sack a staff member after 36 years'. The experience generated a lot of tension between the partner GPs, as her fellow principal GP tended to neglect staffing issues:

He wouldn't bite the bullet and I was wary about having to take the lead on that (GP 9, female)

According to the interviewees who were also principal GPs, the responsibility for regulatory compliance can be demanding requiring additional time for practice meetings and the drafting and implementation of practice policies. The need to address these regulatory concerns, in addition with the other demands placed on these principal GPs, has proven demanding for some of the interviewees:

We have partner meetings of the principals of the practice every fortnight and recently we have been having them every week because there are so many government compliance issues that we have to deal with (GP 6, male).

Some interviewees, who were also principal GPs, found the responsibilities associated with managing a practice quite taxing. These responsibilities, in addition to the demands of managing their own patient load, further intensified the psychological tolls of work for those interviewees.

4.5.3 Work-Family Conflict

The interviewees WFC is bi-directional, encompassing both work interference with family (WIF) and family interference with work (FIW) (Carlson et al., 2000), which is congruent with conceptualisation of WFC in the quantitative aspect of this study. To adequately grasp WFC, it is vital to assess in both directions, as both WIF and FIW contribute to form WFC.

4.5.3.1 Work Interference with Family

According to some interviewees, job demands interfered with family life. Significant technological and social developments have resulted in a fast-paced information driven society where individuals expect instant service with little regard for how this need might inconvenience others. General practice is not immune from this development. One interviewee noted significant increases in both the number and intensity of the hours worked:

One of I think is that 24 hour open-access to information and patients feeling the need to seek advice, so it's part of the fast food, fast everything environment that we live in, sort of first world, 21st century society. Medicine is not immune from that, and I'd suggest that other health disciplines also aren't immune (GP 1, male).

Another interviewee recounted;

It is a lifestyle. So you can't just be a GP 9-5, you have to do it out of hours (GP 8, male).

According to some interviewees with the demands of general practice transcending typical office hours, there is the potential for WIF to occur. As practice-related demands consumed more time and cognitive effort, the interviewees were left with fewer resources to allocate to accommodate family demands, with the potential to lead to the formation of WFC.

Another interviewee recounted how additional workloads ultimately extend the amount of time consumed by practice-related tasks;

I do work long hours and I don't get away till late sometimes. I mean I didn't get away till 7 p.m. last night

and I mean my work day finishes at 5 p.m. but I think I can't just walk away and leave everything unfinished, otherwise I can't relax anyway (GP 2, female).

When asked, many interviewees cited the desire to help others as a prime reason for continuing their practice. This reason was the primary motive for the interviewees to unofficially extend their working hours. For some interviewees the constant workload can be seductive to avoid problems with life outside of work. As one interviewee recounts;

You can't just work, work, work. I mean general practice is very seductive because there is so much work out there you can work twelve hours a day and never have to go home. There is plenty of work there (GP 6, male).

Interviewees indicated that they were involved in a lot of work outside of hours, both paid and unpaid, in community and healthcare organisations. At times where the interviewee's partner is not understanding of these additional demands there is the potential for WIF to occur. An interviewee who is married to a lawyer provided some insight into her experience in regards to this matter. By habit the interviewee often assumes additional work outside of hours and during holiday periods (e.g. Christmas), potentially causing issues if the partner is not accommodating the work demands:

The out of hours things, I think GP Access is an outside of hours thing I do once a month that doesn't stress me but sometimes stresses my husband as he doesn't work so much out of hours (GP 4, female).

According to the interviewees, their work schedule, in terms of both paid and non-paid positions, differs greatly from the majority of professions. With constant demand for their services, the interviewees had the opportunity to work long hours often at the expense of fulfilling their roles within the family/non-work domains, potentially resulting in WIF.

Some interviewees shared accounts of the difficulties they have faced in communicating a serious diagnosis. As one interviewee recounted:

A difficult or stressful diagnosis [is something I struggle with], I have never found it easy to tell people they have some sinister condition. We do it and I do it to the best of my ability but it is always hard to say to somebody ‘Well that lump in your breast is cancer and this is what we are going to do about it’ (GP 10, female).

The delivery of such diagnoses can have a great impact on interviewees, the effects of which stretch beyond their regular consultation hours effecting their mental health for the succeeding hours.

Some interviewees used certain routines to limit the negative impacts of work from affecting their home life. Despite their different methods most attempted to shed the worries of their work environment as they prepare to enter the home domain. One interviewee for instance began this process as he drove home to “switch from being a general practitioner to being a parent again, a husband and father.” He clarified, “making that adjustment and giving yourself time to adjust is important.” Through this process the GP is able to shift into his various roles with his family setting with little impact from general practice.

Others de-stressed on the way home by listening to soothing material:

I can usually tell what my day is like by if I just listen to whatever is on the radio or if it has been a particularly bad day it is either really loud music or really soothing music and that is normally gone by the time I’m halfway home, it takes me twenty minutes to get home (GP 10, female).

These examples demonstrate how the interviewees separated their work and family environments. These practices helped them to leave the demands of general practice within their practice walls and be relatively unaffected by these stressors out of hours.

4.5.3.2 Family Interference with Work

Some interviewees suggested that the flexible working conditions associated with general practice enabled them to fulfil their parenting responsibilities. This was especially the case among female interviewees:

When I started as a GP I was pregnant and had small children, so my home life impacted upon my availability to work the hours that I could have or should have (GP 10, female).

This interviewee prioritised family over work, with her career taking second place to the responsibility of taking care of her children. The interviewee's availability to practice was minimised due to the competing interests, ultimately resulting in delays in terms of the career and professional development of the interviewee.

Another female interviewee provided an account of the time where she assumed sole parenting responsibilities of her children following a marriage breakdown. The increased demands that this change imposed restricted the availability of and flexibility surrounding the hours of practice for the interviewee:

I have been a single mum since 2007 ... so I had to get out on time because my children needed to be picked up and there was no one else to pick them up (GP 4, female).

The interviewee's work schedule was inflexible, preventing the ability to extend working hours to deal with additional patient loads. The rigid timeframes that she was available to deliver primary care was problematic for both the interviewee and her fellow GPs. She found the pressure of finishing on time despite unexpected delays stressful. When significant delays had occurred throughout the day, her fellow GPs would be obliged to see the remaining patients thus increasing their workload and potentially creating significant levels of WIF for them and guilt for the interviewee.

Some interviewees were also impacted by family illness. One interviewee described a time where he unexpectedly had to travel internationally for a long period because of his mother's poor health. As such little notice was available, potentially intensifying the workload of his fellow practitioners:

For example quite recently I had to travel overseas for my mother's illness and that was at fairly short notice ... The staff at the front desk had to say "Sorry he has had to go overseas to see his mother who's sick and won't be back for a couple of weeks." (GP 1, male)

This demonstrates how family demands can interfere with the GPs ability to fulfil their clinical responsibilities. Another cited colleagues who had to leave general practice to accommodate family needs. He described the situation of a fellow GP who decided to leave general practice to take care of his ill wife:

One of the doctors that worked with us until recently had to leave as his wife is quite sick. He is an older gentleman and his wife is unwell, and they came from a different country, so she went back to her home country. Then the gentleman had to leave and go back to look after her (GP 3, male).

This experience reveals how family responsibilities can surpass clinical responsibilities. Even though the interviewee suggested this GP worked within a supportive practice, his wife's situation took priority.

Another interviewee described when the principal GP's wife became seriously ill. Over time, the principal's ability to manage the practice declined, and this responsibility was unofficially transferred to the interviewee who assumed a greater managerial role:

His wife was subsequently diagnosed as lung cancer two months later and she was shockingly sick and he wasn't coming to work, affecting our practice viability... When I said to him a couple of times, what are you going to do if she needs palliation, he had no idea ... I was at him because this can't go on (GP 9, female).

These examples demonstrate how family responsibilities affect individual GPs, their practice and their colleagues. The above experience not only shows the fact that the extreme family demands led the decreased commitment of the GP to his practice-related obligations, but also the implications that FIW has on fellow GPs.

4.5.4 Resilience

The interviewees primarily spoke of resilience in two ways. They spoke of positive attitudes and of adapting themselves and their practice-style to shield from stress. Both are described in turn.

4.5.4.1 Positive Qualities/Attitudes

Some interviewees strongly believed that their possession of a positive attitude has enabled them to continue practicing despite the stressors they encounter:

I am, by nature, a relatively positive person and I'm sure that helps as well (GP 10, female).

That's why I think being easy going and optimistic is an attribute as you often have so much sadness and misery (GP 2, female).

These interviewees have perceived benefits from their resilient attitudes. Through possessing positive attitudes and values, these interviewees have been able to limit the potential influence of job related demands upon their own wellbeing.

Some interviewees suggested a resilient attitude can help with recovery from illness:

It's like when I was told I have a malignant breast lump, [I thought to myself] I'm not dead, it's not the end of the world. Let's get it on and get it sorted out. Let the surgeon worry about it. I need to get this show on the road (GP 9, female).

That [my positive attitude] has enabled me to even overcome a very major thing, I had all my large bowel removed, I had an ileorectal back in 1991, where you have all your large bowel removed. A lot of people I'm sure wouldn't cope but it's just mentally. And even though I was confronted with that and I felt a little weepy one or two days before I had it but once I had it I knew I had to then rehabilitate myself, I had to get there because my love for my job was so much I couldn't wait to get back (GP 7, male).

The resilient attitude of these interviewees aided in their recovery from serious illness allowing them to return to general practice as soon as possible.

4.5.4.2 Adaption of Practice Style

Resilient interviewees demonstrated an ability to adapt their practice style or environment to compensate for the demands that they were experiencing. One interviewee who experienced excessive work demands changed her work to better suit her circumstances. At one stage the interviewee was practicing for four shifts per week, training a GP registrar, as well as volunteering her services at a homeless health clinic. Following a process of self-reflection, the interviewee decided to reduce her practice hours and scale back her additional responsibilities, including training of GP registrars:

At the end of my last year I said that I had a feeling I was being overwhelmed and I'm doing too much so I'm going to look at the things I'm doing and I'm going to change some of those (GP 4, female).

By having insight into her situation and its associated effects, this interviewee identified practical ways to change it and reduce her experience of stress. By reconsidering her primary care-related obligations, the interviewee was able to continue practicing in a sustainable fashion limiting the potential for burnout to occur.

Another interviewee found benefit in acknowledging the influence that practice-related demands can have, and intentionally practicing within her known limits:

If I know I'm not in the right space is I will actually say to patients, "I don't know if I am up to this one today" or "I don't know if we can go through all of this today so how about I see you next week." Most people are happy with that (GP 10, female).

The interviewee here demonstrates an ability to recognise and manage the challenges she experienced. While this was helpful for her, it may also have been helpful to the patients who did not receive suboptimal care in these instances.

One interviewee discussed various strategies and procedures learnt over time that she has used to shield herself from the implications of the practice-related demands:

So if you have the strategies or approaches and skills you will be able to work your way through most situations. Those sort of strategies have helped me have greater control over my work which I recognise would affect my mental health (GP 9, female).

Through the development of these strategies, the interviewee was able to increase her ability to adapt her work environment, thus providing protection from the potential demands of general practice.

Another interviewee perceives the demands of general practice as potential growth opportunities. The interviewee disclosed how his experience of dealing with certain situations and conditions acted as a motivator to further enhance his knowledge regarding mental health to better care for his potential future patients:

I started doing some psychological medical training back in the 1990's ... It's because I realise there are so many things that can be improved in mental health that I feel committed in these later years of my profession life to try and do something about it (GP 6, male).

Despite the recognition that dealing with mental health issues can be demanding, rather than avoiding those affected, this resilient interviewee perceived this as an indication of need in his current practice and increase the quality of service he could offer to his patients.

4.5.5 Burnout

The interviewees referred to burnout in three key ways. They spoke of reduced personal accomplishment, emotional exhaustion, and depersonalisation. Each is discussed as follows.

4.5.5.1 Reduced Personal Accomplishment

One interviewee, in particular, has experienced reduced personal accomplishment from general practice due to technological and societal changes. With the increase in information available via the internet, the interviewee has found some of his patients believe that they are as capable of diagnosing themselves as the GP despite no formal training. In his opinion this lack of respect is a by-product of

deeper changes within society. The interviewee experienced a growing disrespect for medical professionals illustrated through poor patient-doctor relations:

Well, a lot of the patients today, I would say people under 40, they have already made up their mind what they want. And then they are not interested in hearing an explanation of their lifestyle, they don't want to hear that at all; in fact it makes them sufficiently angry. I have had people walk out of consultations. I have had people throw the prescription back at the receptionist to show their contempt to what I had in all honesty given them (GP 5, male).

The interviewee proceeded to clarify that from such interactions he feels that his skills and expertise are undervalued by patients and therefore receives little satisfaction from providing services to these types of patients compared to previous years:

Job satisfaction drops down to zero when you see an idiot asking for a bunch of tests when it's perfectly obvious he doesn't need a bunch of tests but he needs to stop drinking (GP 5, male).

The interviewee became frustrated due to the belief that his expertise was undervalued. Based on potentially misleading information sourced from the internet, some patients attend consultations with a preconceived belief about their diagnosis and appropriate treatment. In some cases the patients believed that their opinion is more valid than that of the interviewee, which can leave the GP feeling lacking job satisfaction and ultimately feeling undervalued:

If you don't enjoy helping somebody, if you spend a considerable portion of your day defending yourself, being abused and treated in a disrespectful way, your life becomes a miserable thing (GP 5, male).

People fail to tell doctors that what they are doing is of value, so that's one reason why [GPs feel undervalued] (GP 7, male).

Through increased workloads, coupled with the changing patient-doctor interaction has led the interviewee to experience reduced personal accomplishment.

4.5.5.2 Emotional Exhaustion

Some interviewees discussed the excessive psychological tolls of demanding patients and increased waiting times. These pressures were associated with the interviewees being stretched to their limits in an attempt to provide the necessary consultations. Continual exposure to high levels of patient demands and workloads experienced by the interviewees can potentially lead to emotional exhaustion:

I guess the main thing for me is the time pressure. So just constantly working with a waiting room full of patients and feeling like you need to give a good time to each person. But at the same time being aware that there are people waiting and possibly getting annoyed outside (GP 3, male).

Another GP recounts:

By the end of the day you have seen 30 people and would have had 6 intense conversations and even though they are important they would have taken a lot out of you (GP 9, female).

According to the interviewees these demands can be due to a variety of reasons which include but are not limited to difficult patient diagnosis/treatment, unreasonable patient expectations, difficulty accessing relevant patient treatment avenues as well as bureaucratic demands. Prolonged exposure to these stressors can potentially result in emotional exhaustion.

4.5.5.3 Depersonalisation

Due to the high level of job-related demands faced by the interviewees, some interviewees have witnessed fellow practitioners depersonalising their patients to shield themselves from the implications of these demands. Through reducing personal attachment, these practitioners are able to have quick patient turnovers

resulting in additional income for the practitioner and principal alike. The interviewees, however, were weary of this strategy due to the awareness that rushed consultations increase the possibility of misdiagnosis or mistreatment. Describing his colleagues, one interviewee stated:

They know how to handle these [difficult] kinds of patients; they don't get to know their patients. They have learnt that the only way to save yourself is to go along with whatever crazy idea the patient has and do so as quickly as possible so that you can get them out of the room (GP 5, male).

By distancing themselves from excessive patient demands, the GPs described by the interviewee potentially compromise patient health. As this interviewee has suggested, by understanding your patient and their needs, the GP is able to provide a higher quality of service to the patient, ensuring the treatment of the underlying causes of the illness rather than simply managing symptoms. The concerns of the interviewee illustrate the potential impact of depersonalisation on the treatment and therefore wellbeing of patients.

4.5.6 Intention to Quit

According to the interviewees, intention to quit appeared to be associated with a limited ability to manage patient demands, workloads, and effective working relationships with their principal GPs. Throughout the interview process it became evident that as GPs become burnt-out they will take measures to alleviate this stress which in most cases leads to a reduction in hours worked or the GP quitting the profession.

Due to the demanding nature of general practice, some interviewees believe that some GPs will exceed their capacity to cope with the work-related stressors and will tend to leave the profession:

Since doctors are only human beings they will not cope much of this domineering and disrespectful behaviour without having feelings towards that [e.g. leaving the profession] (GP 5, male).

An experienced GP detailed her observations of fellow GPs who work excessive hours, which proved unsustainable. This led the GPs to leave their profession:

There was one colleague who was with us for several years until his contract ran out and he left us, and general practice, and disappeared. He had been with us for 10-13 years and we haven't heard anything from him. He had always struggled with the demands of general practice and I had said to him many times that he should work part time. You need to work part time to be at the right level for your personality, but at that time he was locked into a full-time contract or else it would be extended, so I think he was just waiting it out. But unfortunately that meant as soon as he had finished waiting it out he left completely (GP 4, female).

Other interviewees have changed practices due to conflicting ideals with their previous principal GP. Of these accounts, the primary source of contention was in relation to expected patient loads. Due to the pay structure of many general practices, the more patients consulted results in increased revenue for the practice owners, potentially resulting in unrealistic and unsustainable expectations regarding patient loads. One GP justified her change of organisations due to being 'tired of the management, not the patients'.

Other interviewees' experiences with patients were not as favourable. One interviewee, with over thirty years practice experience, noted a considerable change in patient attitudes and values. These changes have reduced his satisfaction with his relationship with patients. The interviewee described the noticeable change in dynamic of the doctor-patient relationship, with a significant decrease in the level of respect shown towards the practitioner:

It's just not much fun to be a doctor anymore. It is simple... if you don't get satisfaction from your work you will become resentful and depressed, and there are a lot of things that follow on from that. All human beings enjoy

being treated respectfully and lovingly and hate being stood over and oppressed (GP 5, male).

According to this interviewee, as GPs are no longer satisfied with the levels of personal accomplishment derived from general practice they will begin to look for opportunities to minimise their exposure to the excessive demands.

4.6 Conclusion

This chapter detailed the quantitative and qualitative findings of this study. Consequent to the path analysis undertaken, nine of the hypothesised relationships were supported. A significant positive relationship existed between job resources and job demands. Job demands were also linked to burnout and WFC. Importantly, WFC was significantly related to burnout. Additionally burnout was positively related to intention to quit. Although resilience was strongly related to job resources, it did not have the anticipated effect on job demands or burnout.

An analysis of the qualitative data provided greater depth to the aforesaid correlations established through the analysis of the quantitative data. Through this process information was gathered with further substantiated the quantitative findings, personifying the correlations through the experiences of the interviewees. It is important to note however that the findings generated from the qualitative aspect are based on individual experiences of the interviewees and, due to the size of general practice, are not automatically representative of the experiences of all urban GPs.

Resilience is an important attribute for continual commitment to general practice. The quantitative aspect of this study supported significant path relationships between resilience and job resources. Job resources, by definition, limit the impact or extent of job demands as supported in the current study. The quantitative data has also shown the WFC greatly increase experiences of burnout, which is directly related to an intention to quit the profession. Therefore, to increase GP retention, further attention needs to be paid to the areas of job resources, WFC and resilience.

Following this chapter, the next chapter presents a discussion of these findings. The chapter begins by discussing the importance of the findings detailed in Chapter 4 prior to confirming the theoretical contributions and the practical

implications of this study. The chapter progresses to detail the limitations of this study, before concluding with a discussion of future research directions.

Chapter 5: Discussion

5.1 Introduction

This chapter presents the theoretical contributions of the study, the practical implications, methodological limitations and future research directions. It begins by discussing the quantitative findings from testing the hypotheses and the complementary qualitative findings. The most significant of these is that job resources are associated with low levels of job demands, while being positively associated with resilience. Job demands were linked to burnout and WFC, suggesting that WFC is a significant source of stress resulting in higher levels of burnout. Although resilience was associated with decreased levels of WFC, it had no direct association to burnout. As hypothesised, burnout was strongly related to levels of intention to quit.

The theoretical contributions of this study are further highlighted. This study is the first to use the IJSM (Akhtar and Lee, 2010) to investigate the potential effect of resilience on the relationship between job demands and burnout among Australian GPs. Furthermore, this study extended the model by incorporating the constructs of resilience, burnout, WFC and an intention to quit – more specifically, it measured the association and the direction of the relationships between resilience, burnout, and an intention to quit within the context of general practice.

This chapter also details the practical implications associated with this study. Job resources were found to be most important in minimising GP burnout and therefore an intention to quit the profession. WFC was shown to exacerbate burnout. As described by some interviewees, when experiencing burnout, GPs attempt to reduce their stress. This sometimes involves reducing their involvement within general practice. If burnout can be minimised or avoided through the availability of adequate job resources and decreased WFC, their intention to quit the profession may fall over time.

The chapter then concludes by proposing further research to build on this study. Further research is required to better understand the subsequent effects of particular job resources on GP burnout. There is also literature suggesting that emotional intelligence and/or personality type can influence the effect of

job demands – these too warrant further consideration in the context of general practice.

5.2 Overview

The key impetus for this study is the limited workforce capacity within the primary care sector, in Australia and beyond. GPs are the cornerstone of the Australian healthcare system, representing the first point of contact for many patients (Nielsen and Tulinius, 2009). This important role can be taxing for the GP, affecting their job satisfaction and/or wellbeing (Firth-Cozens, 2001, Van Den Hombergh et al., 2009, Benson and Magraith, 2005). Stress from their clinical role can be exacerbated by personal demands (Boran et al., 2012, Virtanen et al., 2008). Collectively, these experiences can diminish GP health, reduce the quality of patient care (West et al., 2006), and increase the likelihood that they will leave the profession (Simoens et al., 2002). Compounded by low GP recruitment (Jones et al., 2012) and the ageing population (Librerl and O'Reilly, 2008, Lutz et al., 2008), finding ways to bolster workforce capacity within the primary care sector represents an important research area.

Resilient GPs are said to have an enhanced ability to manage the challenges of general practice (Clarke, 2011, Sood and Varkey, 2011). Through their ability to adapt to challenging situations, resilient individuals can shield themselves from the potential influence of job demands and thus experience less stress. Although there are numerous general stress models, no model can gauge the influence of resilience on GP burnout and their intention to quit the profession.

The model used in this study is an adaption of the IJSM (Akhtar and Lee, 2010). The IJSM capitalises on the strengths of the JD-R model (Demerouti et al., 2001c, 501) and CoR theory (Hobfoll, 1989), while avoiding many of their primary criticisms. To determine the influence of resilience on GP burnout and their intention to quit the profession, the IJSM was extended to include resilience (Wagnild and Young, 1993a), burnout (Borritz and Kristensen, 1999a, Kristensen et al., 2005), WFC (Carlson et al., 2000), and intention to quit (Begley and Czajka, 1993).

5.3 Key Findings

Following this study, several important findings were identified, a detailed discussion of which is presented as follows (see Table 5.1). By comparing these with the literature, the strength and significance of the findings are reaffirmed.

Table 5.1: Results from Hypothesis Testing

Path	Hypothesis
Hypothesis 1: Job resources are negatively related to job demands	Supported
Hypothesis 2: Job demands are positively related to burnout	Supported
Hypothesis 3: Job resources are negatively associated to burnout	Supported
Hypothesis 4: Job demands are positively related to WFC	Supported
Hypothesis 5: Job resources are negatively related to WFC.	Supported
Hypothesis 6: Job demands are negatively associated with resilience	Not Supported
Hypothesis 7: Job resources are positively related to resilience	Supported
Hypothesis 8: Resilience is negatively associated with WFC	Supported
Hypothesis 9: Resilience is negatively associated with burnout	Not Supported
Hypothesis 10: WFC is positively related to burnout	Supported
Hypothesis 11: Burnout is positively associated with intention to quit	Supported

5.3.1 Job Resources to Job Demands

Significant support was found to indicate that job resources are negatively related to job demands. This finding is complemented by the qualitative data, which illustrated practical experiences of this relationship. Collectively, these findings suggest that with the increased availability of job-related resources, such as job control, supervisory/managerial support, and workplace flexibility; GPs are likely to experience fewer job demands.

The negative relationship between job resources and job demands is important. As the availability of job resources increase, GPs tend to report fewer job demands. The interviewees suggested several reasons for this, including the inability for some job resources and job demands to co-exist, as well as the benefits associated with greater resources. The availability of particular job resources is incompatible with the perceived generation of particular job demands. For example, high levels of supervisory support are incompatible with excessive supervisor demands. Some interviewees also spoke of the positive emotion generated by adequate job resources. They reported feeling empowered and equipped to meet patient demands and therefore noticed fewer effects from job demands. When combined, these experiences enable resilient GPs to perceive lower levels of job-related demands.

According to a number of interviewees, some job resources and job demands are mutually exclusive; as such, the availability of particular resources prevents some job demands from affecting the GP. Within this study, some job resources were incompatible with particular job demands. For instance, if an interviewee had the opportunity to influence workplace policy – an aspect of job resources – they were unlikely to report instances when workplace policy exacerbated their job demands. An additional example of this is the availability of physical resources. Access to, or control over physical resources allowed some interviewees to feel more competent and able to fulfil their role. The qualitative findings suggested that key resources included supervisory/managerial support (as demonstrated by workplace policy on the number and types of patients that GPs could consult, and break-times), as well as the availability of support staff. Some interviewees also reported personal strategies to manage their workload – notably, the ways in which they used their time and ensured periods of respite between patient consultations.

Job resources can enable GPs to better respond to their working conditions and as such, experience fewer work-related stressors. As job resources encourage professional development, personal growth, and help to achieve work-related goals (Bakker et al., 2004, Demerouti et al., 2001c), job resources can enable GPs to continue to practice relatively unaffected by the demands of their job. Managerial and collegial support, as well as the opportunity to tailor their professional practices can enable GPs to perceive a greater sense of self-efficacy. Although these resources do not directly minimise workload or reduce bureaucracy, GPs may experience fewer consequences of the reported stressors.

This study found that job resources were associated with low levels of job demands. This finding reflects the importance of job resources in minimising job demands as well as the implications associated with these demands. These findings are congruent with past research. For instance, Bakker and colleagues (2005) found a strong negative correlation between job resources and job demands. Similarly, in their study involving GPs, practice managers and other practice staff, Calnan and colleagues (2000) found those with higher levels of job resources reported lower levels of job demands. It is important to note they

also found GPs experienced higher levels of job demands than their colleagues within the practice, including practice nurses, receptionists, and administrative staff. Shirom and colleagues (2006) used CoR theory (Hobfoll, 1989) to understand the interactions of job resources within general practice. They focused primarily on the resource of autonomy, finding significant relationships between job resources and decreased job demands. This lends further support to the findings of this study.

The hypothesised relationship between job resources and job demands was supported by the quantitative data analysis, which was complemented by the qualitative data analysis. The quantitative results suggest a significant relationship indicating that individuals with high levels of job resources experience fewer or less significant job demands. The qualitative findings affirmed this relationship, providing detail concerning possible reasons. Although some interviewees indicated that particular job resources cannot co-exist with particular job demands, they indicated that the resources enabled them to be in a healthier psychological state. This finding supports previous research (Bakker et al., 2005, Calnan et al., 2000, Shirom et al., 2006).

5.3.2 Job Demands to Burnout

The quantitative data analysis suggested that GPs are likely to experience burnout in the face of continued job demands. This is consistent with the qualitative data analysis. Interviewees described how job demands can have a significant physical and/or psychological toll. As these effects accumulate, they can experience emotional exhaustion and a reduced sense of personal accomplishment. To manage these effects, some interviewees indicated that some of their colleagues depersonalised patients to weaken the doctor-patient relationship. This finding reflects that of other studies (Kirwan and Armstrong, 1995).

GPs often face situations that can reduce their sense of personal accomplishment. According to some interviewees, this primarily involved limited access to resources as well as difficult patient interactions. Most indicated that they joined general practice to support patients – this sometimes requires specialist referrals and helping patients to navigate the health system.

However, when their efforts were thwarted, the interviewees sometimes felt annoyed, discouraged, and a reduced sense of job satisfaction. This in turn can reduce their sense of personal accomplishment.

Throughout the interviews, it was apparent that personal accomplishment was impacted by difficult patient interactions. In this context, a 'difficult patient' is one who psychologically strains the GP by, for instance, demonstrating limited respect for GP expertise. According to some interviewees, this was part of a wider cultural change. However, regardless of why some patients were 'difficult', the interviewees derived little satisfaction from these consultations.

Previous studies report similar findings on the relationship between job demands and burnout, both within and beyond general practice. Schaufeli and Bakker (2004) concluded that job demands were positively associated with the development of burnout, especially through the component of emotional exhaustion. Complementary findings were noted by Bakker and colleagues (2005), who found job demands to be positively related to all three factors of burnout. Within general practice, burnout was strongly associated with increased workload and administrative matters (Cathébras et al., 2004).

The quantitative data analysis reported in this study revealed a significant positive relationship between the job demands experienced by GPs and burnout. Reasons for this were described by the interviewees. These findings reflect previous research, both within (Cathébras et al., 2004) and beyond general practice (Schaufeli and Bakker, 2004, Bakker et al., 2005).

5.3.3 Job Resources to Burnout

The relationship between job demands and burnout was supported by the quantitative data analysis. A significant negative association was shown illustrating that GPs with high levels of job control and supervisory support experienced lower levels of burnout. The qualitative findings suggested the interviewees had experienced instances where increased job resources reduced burnout. It is important to note that although the interviewee experiences shed more light on this relationship, by nature they are not generalisable to all GPs.

The work arrangements of GPs are reasonably flexible. Some interviewees detailed instances where they were able to adapt their practice demands, an

element of job resources, to better suit their personal situation. In such situations, some interviewees had the opportunity to adapt their work commitments to reduce their emotional demands, which if sustained, could develop into emotional exhaustion. Such opportunities were only available because of workplace flexibility.

For other interviewees within larger practices, the opportunity to semi-specialise in an area of interest helped to minimise the potential for depersonalisation. This can also increase GP engagement in their work. One interviewee indicated that they chose to semi-specialise in mental health as it offered greater awareness of the patient experience. The time often needed to appreciate the complexity of mental health issues may contribute to increased time pressure and additional psychological burdens. However, this interviewee appeared unaffected, even thriving in the chaos. In such cases, the value placed on GP-patient interaction is unlikely to co-exist with depersonalisation, potentially resulting in increased personal accomplishment.

Studies suggest job resources, both job control and supervisory support, are linked to decreased burnout. Schaufeli and Bakker (2004) found that social support reduces exhaustion and cynicism while increasing professional efficacy. Similarly Bakker and colleagues (2005) found that job resources, notably workplace autonomy, collegial support and supervisory support, influenced all factors of burnout. Within the medical field, Freeborn (2001) found physician burnout was influenced by increased perceived control over the work environment, increased physical resources and social support. Unlike previous studies (e.g. Schaufeli and Bakker, 2004, Bakker et al., 2005, Anis-ul-Haque and Khan, 2001), Freeborn (2001) found the primary element that minimised burnout was job control. As the physician perceived higher levels of job control, they were less influenced by job demands, thus reducing burnout. Similar findings were confirmed by LeBlanc and colleagues (2001).

Within general practice, Van Dierendonck and colleagues (1994) found social support minimised burnout, particularly when fuelled by difficult patient interactions. When GPs consult demanding patients, burnout can occur. According to Van Dierendonck and colleagues, minimising the lasting

consequences of such difficult interactions can reduce the likelihood of burnout.

Aligned with previous research (Schaufeli and Bakker, 2004, Bakker et al., 2005, Freeborn, 2001, LeBlanc et al., 2001, Van Dierendonck et al., 1994), the quantitative findings in this study supported the hypothesised relationship between job resources and burnout. Although not generalisable, the interviewees shared experiences which suggested that certain job resources can decrease the primary components of burnout. Increased work flexibility can avert emotional exhaustion, while the ability to sub-specialise related to job control, reduced depersonalisation and increased job-related personal satisfaction.

5.3.4 Job Demands to Work-Family Conflict

The quantitative data analysis suggests that job demands are positively related to levels of WFC. This is consistent with the qualitative data analysis. According to some interviewees, as the demands of general practice increase, so do the time and effort required of GPs, the physical and psychological effects they may experience, and the potential for WFC.

The quantitative analysis supported the relationship between job demands and WFC. As the demands of general practice increase, physical and psychological tolls are likely (Ádám et al., 2008). In this study interviewees attributed these demands to: increased bureaucracy; an increased role in patient care; the ageing population; decreased workforce capacity; and changes in patient expectations. These demands can compete with personal time and exacerbate WFC as both domains compete for the GP's attention.

The relationship between job demands and WFC is further demonstrated in the interviews. Some interviewees believe that changes to technology have transformed society, resulting in a fast-paced information driven society where instantaneous service is expected, and general practice is not immune to this. Patients expect instantaneous GP service, with little consideration given to the implications this has for the GP. This intensification has caused the delivery of general practice to exceed the traditional 9-5 hours, requiring GPs to work

additional hours to see patients or complete associated paperwork. This process presents the potential for WIF to occur.

In addition to the physical time, WFC includes the carryover mental drain from either domain (Carlson et al., 2000). GPs are presented with a range of ailments (Nielsen and Tulinius, 2009) that have various levels of cognitive and physical strain on the GP (Calnan et al., 2000, Calnan et al., 2001). In this study, some interviewees noted times when the cognitive demands of general practice transcended the physical time spent within general practice – especially when supporting patients with mental health issues or delivering a difficult diagnosis. As the physical and cognitive demands increase, the GP has fewer resources to dedicate to the private domain. When combined with the physical and cognitive demands of home-life, this can create WFC (Carlson et al., 2000).

Research suggests WFC is exacerbated by increased job demands. Voydanoff (1988) identified that increased job demands, in particular workload and pace of work, are positively related to WFC. Thus, as the workload or pace of work increases, which require additional time and effort, the individual is unable to attend to personal responsibilities. Montgomery and colleagues (2006a) reported that job demands, particularly emotional job demands, were significantly related to WFC. Thus, in some cases the emotional drain of practicing medicine can be more stressful for the physician than increasing the pace of work. Similar findings have been noted by others (Rout, 1996, Swanson et al., 1998).

Both the quantitative and qualitative data analyses in this study suggest job demands are positively related to WFC. As the demands of general practice increase, greater time and attention are required from the GP, leaving less time and energy for personal life. This creates potential for WFC. These findings are supported by research that suggests job demands feed WFC (Rout, 1996, Montgomery et al., 2006a, Dierdorff and Ellington, 2008, Swanson et al., 1998, Butler et al., 2005).

5.3.5 Job Resources to Work-Family Conflict

As confirmed by the quantitative analysis, job resources are negatively associated with levels of WFC. Not only were job resources directly related to

low levels of WFC, job resources were negatively correlated with job demands. As shown in section 5.3.4 job demands are strongly associated with increased WFC, further adding to the impact job resources has on levels of WFC.

Some interviewees recounted experiences where the availability of job resources decreased WFC. For instance, workplace flexibility and job control helped some interviewees to minimise or avoid WFC. However, these experiences may not be generalisable to all other GPs.

With flexible working conditions, some interviewees were able to mould their practice responsibilities around personal responsibilities. This flexibility included both short and long-term arrangements. By taking advantage of short-term flexibility, some interviewees found balance between general practice and immediate family demands, averting FIW. Others took advantage of this workplace flexibility for longer periods – this was particularly the case for female participants who had parental responsibilities.

Some interviewees suggested that job control reduced WFC, primarily by reducing WIF. Having an element of control over their work enabled them to ensure work life did not impact on their personal life. This in turn averted WFC. With increased job control and flexible working conditions, the interviewees were able to better manage their work and patient scheduling. These opportunities enable them to limit the personal impact of general practice.

Research suggests that job resources are negatively associated with WFC. Individuals can avoid WFC through high levels of job control (Voydanoff, 1988, Grönlund, 2007, Butler et al., 2005). In addition to job control, Demerouti and colleagues (2011) found other resources can minimise WFC, including the opportunity to participate in decision-making process, developmental opportunities, as well as relationships with supervisors and co-workers. These latter findings highlight the importance of supervisor and collegial relations in minimising WFC.

Aligned with past research, the current study has revealed situations where the availability of job resources allowed the interviewee to avert WFC. As previously noted (see section 5.3.1), job resources were negatively related to

job demands. This trend is significant given the relationship between job demands and WFC. The interviewees' accounts complement previous studies. Research suggests that the primary job resources to reduce WFC were job control (e.g. Grönlund, 2007, Butler et al., 2005, Voydanoff, 1988) and supervisor/collegial support (Demerouti et al., 2011).

5.3.6 Job Demands to Resilience

The hypothesised negative correlation between job demands and resilience was not supported by the quantitative data analysis. A positive significant relationship was illustrated between job demands and resilience which contradicted the original hypothesis. This finding may be representative of the idea that some individuals thrive with sustainable exposure to job demands. For example some interviewees shared how they derive greater fulfilment from consultations with patients with complex health issues. Although the complex issues are challenging, the interviewees received a great boost to their personal confidence when they were able to provide a service that had a tangible benefit to the patient's condition. As personal competence is a prime component of resilience, these experiences may increase the overall levels of resilience for the GPs concerned. Although representative of the experience of some interviewees, this reasoning cannot be generalised to all GPs. As resilience was only measured once throughout the study, there is no way of determining any change in the individuals' level of resilience over time. can increase levels of personal competence, which individuals who experience high levels of job demands are more cognisant of their levels of resilience.

Despite this, the interviewees detailed experiences when job demands, like bureaucracy, impacted their resilience. They spoke of initiatives like eHealth, which encourages GPs to transition to online record management to ease multidisciplinary, collaborative care (Bracey, 2013a, Department of Health, 2014). For some, this change has been problematic, particularly given the limited training received. Similarly, interviewees also indicated they were used by the government to filter patients for other initiatives, like the mobility parking or driver's licencing scheme. In addition to a greater workload, some noted the absence of training to support this role. Being uncertain about or ill-

equipped for these duties can reduce GP resilience. Yet these views may not reflect the experience of other GPs.

Previous research supports a relationship between job demands and resilience. According to Dunn and colleagues (2008), prolonged exposure to time pressures and other stressors can negatively influence the ability of medical students to cope with the situations they face, demonstrating a decrease in resilience. Based on this understanding, it may be assumed that the time and workload pressures on GPs could have the same diminishing effect on their resilience levels.

Contrary to existent research, the proposed relationship between job demands and resilience was not supported by the quantitative data analysis in this study. However some interviewees shared experiences where bureaucratic demands have diminished their resilience.

5.3.7 Job Resources to Resilience

Resilience is better explained through job resources, as opposed to job demands. The analysis of both the quantitative and qualitative data supported the hypothesised relationship between job resources on resilience. The quantitative analysis identified a significant positive correlation between job resources and resilience.

In this study, the interviewees shared several examples where the increased availability of job resources enhanced their adaptability to the changing environment of general practice. Support from colleagues and supervisors appeared to be fundamental to resilience. Built on collegial support, some interviewees found benefit in informal networks. These supported the interviewees during challenging times, providing an opportunity to talk through difficult patient interactions or seek practical advice to optimise quality patient care. According to Cooper and colleagues (1989) interactions with difficult patients can be psychologically taxing on GPs, thus reducing the GP's professional efficacy. After such consultations, interviewees tended to converse with a colleague to manage these effects, restore professional efficacy, and return to practice.

Collegial conversations also opened pathways for knowledge sharing allowing senior GPs to share their strategies for reducing the impact of the demands of general practice. Some interviewees described techniques to manage the stresses, which they garnered via a supportive practice community. They and their colleagues shared strategies to better adapt to the potentially stressful practice environment.

According to some interviewees, the practice culture and the social networks therein are influenced by the attitudes and values of the practice principal. The principal can be instrumental in developing practice norms, like patient scheduling, practice policies, and the availability of support staff. This demonstrates the ability of the principal to influence practice culture. For instance, by purposefully allocating some time between patient consultations, some interviewees had opportunity to cognitively prepare for the next patient. For some, this involved documenting extensive patient notes between consultations or seeking collegial support immediately after a difficult patient interaction. Similarly, some interviewees spoke of principals who had attempted to alleviate the GP-workload by encouraging others within the practice to assume responsibilities like patient follow-up. A supportive practice environment helped these interviewees to adapt to workplace stress, thus demonstrating their resilience.

Research shows support for the current findings. Jensen and colleagues (2008) found supervisor and collegial support enhanced resilience. Additionally, support can encourage less negative appraisals of threat and increase self-efficacy (Fontana et al., 1989, Travis et al., 2004). As such, collegial and supervisor support can enable the individual to better adapt to a changing environment, influencing their appraisal of threat and their sense of self-efficacy.

As illustrated in this study, there was a clear positive correlation between job resources and resilience. The qualitative data analysis reflects previous research, which suggests resilience is bolstered by collegial and supervisor support. Through appropriate levels of supervisor support, GPs can work in conditions that are well resourced and allow time for self-regulated exercises to

minimise the effects of stressful working conditions (Jensen et al., 2008), therefore fostering resilience.

5.3.8 Resilience to Work-Family Conflict

Aligning with past research (e.g. Haglund et al., 2009, Cooke et al., 2013), high levels of resilience were significantly related to low levels of WFC. This finding was further supported through the insights gained throughout the qualitative phase of this study. Some interviewees frequently use resilient practices to further enforce the geographical and mental boundaries of work and home life, thus experiencing lower levels of WFC compared to GPs with fewer resilient attributes.

The quantitative aspect of this study supported the hypothesised relationship between resilience and WFC. This finding gives weight to the assumptions that resilient GPs, through their greater self-awareness, are able to take steps to confine the demands of general practice to their work-life, limiting the carryover of work-related stress in the home domain (Cooke et al., 2013). These assumptions were further supported in the qualitative data collected.

Some interviewees recounted experiences where resilient practices reduced WFC. They described techniques they used to transition themselves between their professional and personal roles, and reduce the influence of practice-related stressors on themselves and/or others. Examples included the use of music during the drive home to reflect on their work day; while others used the geographical separation of both roles as a barrier to the cognitive demands associated with each role. According to the interviewees, these techniques helped to reduce any carryover demands from general practice, therefore reducing their WIF.

Resilient individuals are known for their optimistic outlook on life and often use humour and positive thinking to manage job-related demands (Tugade and Frederickson, 2004). Positive emotions allow individuals to shield themselves from work demands. Although there is limited research in this area, resilient individuals were anticipated to use their positive emotions in a similar way within the home environment. The findings from this study add further support to this notion.

5.3.9 Resilience to Burnout

The hypothesised relationship between resilience and burnout was not supported by the quantitative data analysis. Burnout was better predicted by job demands, relative to resilience. Some support for the relationship was found following the qualitative data analysis. For instance, some interviewees described situations where their resilient characteristics or practices averted burnout. As observed in previous research (Carver and Scheier, 1992, Kumpfer, 1999), these included adopting an optimistic attitude towards general practice, and purposefully taking short breaks between patient consultations. However these findings cannot be assumed to represent the experiences of all GPs.

The limited quantitative support reported in this study differs from previous research (Tugade and Frederickson, 2004, Rutter, 1990, Glasberg et al., 2007). For instance, Menezes and colleagues (2006) found resilient individuals were less emotionally exhausted and experienced greater personal accomplishment. Within Australian general practice, Cooke and colleagues (2013) found resilience is positively associated with personal accomplishment and negatively associated with burnout. This suggests resilient individuals are able to experience greater satisfaction from their role in patient care.

This unexpected finding might be partly due to the way participants responded to the resilience scale. Although the scale measures resilience at a general level, which are not context-bound, participants may have responded with their professional experiences in mind (Wagnild and Young, 1993a). Despite the items being worded generally, participants could have falsely assumed they related purely to their practice experience opposed to their life experience. Therefore the measurements may relate specifically to resilience specific to general practice that may be of less use in the private domain.

Although the resilience scale measures general levels of resilience (Wagnild and Young, 1993a), participants could have completed the section based on their work experiences rather than their life experiences. Burnout was measured through the CBI (Kristensen et al., 2005), which segments burnout into three categories being personal-related burnout, work-related burnout and

client-related burnout. The distinction in the wording of these items is far clearer than the resilience scale. Therefore if the resilience scale only measured work-related resilience, as the CBI includes personal-related burnout, this discrepancy may be due to the misinterpretation of survey items.

Research demonstrates that resilient individuals regularly use optimism to limit the potential significance of stressors (Carver and Scheier, 1992, Kumpfer, 1999). Similarly in this study, one interviewee described how adopting an optimistic attitude towards general practice enabled him to avoid negative effects of general practice. By making a conscious effort to remain optimistic, this interviewee indicated that he was able to withstand the demands of general practice and avoid emotional exhaustion. Other interviewees used alternate techniques to reduce the negative effects associated with general practice. For instance one interviewee regularly takes short breaks between patient appointments to reduce the psychological impact of difficult consultations. By allowing GPs to effectively process through the emotions which have arisen due to patient appointments, potential burnout can be decreased.

The hypothesised relationship between resilience and burnout was not significant in this study. Although some qualitative accounts were consistent with previous literature, there was insufficient evidence to empirically support a relationship between the two constructs among this Australian metropolitan GP sample.

5.3.10 Work-Family Conflict to Burnout

As proposed, there is clear evidence of a positive correlation between WFC and burnout. Following the quantitative data analysis, a highly significant path correlation was identified between the two constructs, forming the primary evidence for the hypothesis. Further support was found in the qualitative data analysis.

The qualitative findings revealed instances when WFC rendered the interviewees more prone to burnout. This is evident in terms of FIW and WIF. Some interviewees described times when thoughts about stressful personal situations entered the workplace, and vice versa. Furthermore, they associated

these experiences with reduced concentration levels, the depersonalisation of patients, and the experience of workplace stress.

Some interviewees purposefully used strategies to manage workplace stress, particularly when it was exacerbated by personal concerns and family issues. One interviewee described a strategy she used when a family member was quite ill. During that time she would constantly remind herself to be empathetic towards patients despite her personal circumstances. Due to the level of emotional connection GPs share with their family members, the stress of family illness can have a greater impact on the GP (Montgomery et al., 2006a). This stress can exacerbate the impact of typical practice-related stressors making the GP more susceptible to emotional exhaustion. Additionally in situations of family illness, the ability for the GP to recuperate from the stressors in both domains are often compromised and can fuel burnout.

The positive correlation between WFC and burnout reflects previous research. For instance, Montgomery and colleagues (2006a) found WFC was significantly associated with burnout, particularly emotional exhaustion. Similarly, *Ádám* and colleagues (2008) reported that WFC was associated with emotional exhaustion and depersonalisation. Furthermore, they found female physicians had higher levels of burnout and higher levels of emotional exhaustion. These findings were attributed to the higher demands expected of females in the home environment (Gutek et al., 1991, Frone et al., 1996). Although female participation in the workforce has increased (Britt et al., 2013, Britt et al., 2011), some women are expected to fulfil traditional home duties (Berridge et al., 2009). As such, when workplace and personal stress combines, burnout may occur.

Reflective of previous studies (Chaoping et al., 2003, Montgomery et al., 2006a, e.g. Geurts et al., 1999, *Ádám* et al., 2008), findings from this study support the hypothesis between WFC and burnout. As WFC intensifies, the GP is likely to experience greater pressure. If prolonged, they can experience emotional exhaustion, depersonalisation, and a reduced sense of accomplishment. These in turn increase the likelihood of burnout.

5.3.11 Burnout to Intention to Quit

As hypothesised, a positive correlation was found between burnout and an intention to quit the profession. This suggests that as GPs experience significant levels of burnout, they are more likely to consider leaving general practice to alleviate negative experiences. These findings were supported by the qualitative data analysis.

According to the interviewees, the primary component of burnout that influenced their intention to quit was reduced personal accomplishment. Some explained how their job satisfaction has decreased over time. This was attributed to several factors, including changes in patient expectation, and limited patient respect for GP expertise. Collectively, these factors have reduced the satisfaction the participants once derived from patient consultations – and this in turn has strengthened their intention to quit general practice.

As evident in the qualitative data, intention to quit general practice grows when job satisfaction fails to compensate for the emotional and physical demands. Some spoke of reconsidering their career, seeing limited reason to endure the negative effects of general practice. According to the interviewee, this experience was not isolated, for he observed similar experiences among peers. Some have transitioned into another area of healthcare which they believe to be far less demanding than general practice. Due to reduced personal accomplishment, GPs are no longer satisfied with the benefits of general practice (Joyce et al., 2011, Scott et al., 2006). As GPs sense that patients undervalue their skills, they are more likely to choose to leave the profession.

Findings from this study reflect previous research (Schaufeli and Bakker, 2004, Acker, 2012). For instance, Taylor and colleagues (1990) found burnout was positively associated with an intention to quit. More specifically, the greatest predictors of this intention were previously recorded intentions to quit and prolonged burnout. Similarly, Weisberg and Sagie (1999) found mental and physical exhaustion significantly influenced an intention to quit.

This study found considerable support for the hypothesised relationship between burnout and an intention to quit. The findings suggest that as GPs

experience emotional exhaustion, depersonalisation, and dissatisfaction with general practice, they are likely to entertain ways to leave general practice. This reflects previous literature (e.g. Dyrbye et al., 2010b, Acker, 2012, Weisberg and Sagie, 1999, Taylor et al., 1990, Schaufeli and Bakker, 2004).

5.3.12 Summary

From the aforesaid discussion, seven key findings are apparent, which are presented in Table 5.2.

Table 5.2: Key Findings

Hypothesis	Findings
1: Job resources are negatively related to job demands	High levels of job resources are associated with low job demands. With low demands, GPs will experience less stress and the associated effects.
2: Job demands are positively related to burnout	High levels of job demands are positively related to burnout. With continued exposure to job demands, the GP can become susceptible to emotional exhaustion, depersonalisation, and reduced personal accomplishment.
3: Job resources are negatively related to burnout	High levels of job resources are negatively associated to burnout. As GPs experience greater job control and supervisory support they feel better supported to encounter situations that could potentially generate burnout.
4: Job demands are positively related to WFC	High job demands are associated with WFC. As job demands rise, the equilibrium between the domains is compromised, leading to WFC.
5: Job resources are negatively related to WFC	High levels of job resources enable individuals to have control over their work environment to better manage their work and non-work commitments
7: Job resources are positively related to resilience	Job resources are positively related to resilience. Resilience had a demonstrated benefit on wellbeing, but had no significant influence on WFC or burnout.
8: Resilience is negatively associated with WFC	High levels of resilience are associated with low levels of WFC. Resilient GPs are able to confine practice-related stress to their work environment, limiting the levels of WIF they experience.
10: WFC is positively related to burnout	WFC is positively associated with burnout. WFC places additional burdens on GPs, which can lead to emotional exhaustion and/or depersonalisation.
11: Burnout is positively associated with intention to quit	Burnout is correlated with an intention to quit the profession. As GPs experience greater demands, they are likely to experience less personal accomplishment, greater burnout, and seek ways to escape these demands – this may include leaving the profession.

5.4 Theoretical Contributions

This study makes several theoretical contributions to the literature. Extending Akhtar and Lee's (2010) conceptualisation of job demands and resources, the study measured a more comprehensive representation of the relationship between job resources and demands following the inclusion of resilience, burnout, WFC and intention to quit. Studies have shown the importance of these concepts within general practice; however, no published study has

measured them in a single study. A more comprehensive model can help to understand GP burnout and their intention to quit general practice.

This study also considers the relationship between constructs and measurement items. Most measurements merely reflect the construct they attempt to measure. Sometimes however, items combine to form the construct; thus the construct is formative, rather than reflective. Accordingly, the measures of psychological job demands, role conflict, and WFC were deemed to be formative. It is important to clarify the nature of the constructs otherwise findings that emerge from these measures may be questionable.

5.4.1 Unique Path Model of Burnout and Intention to Quit

This study was the first to determine the potential minimising effect of resilience on job demands and burnout among Australian GPs. The study is unique given its use of an augmented version of the IJSM (Akhtar and Lee, 2010). Building on the JD-R model (Demerouti et al., 2001c) and CoR theory (Hobfoll, 1989), the IJSM offers a more comprehensive understanding of job stress and its implications. This is achieved by recognising the role of resource investment, resource protection, and the primitive instincts regarding resource loss (Akhtar and Lee, 2010).

To better understand the influence of resilience on burnout and an intention to quit, it was necessary to establish a new theoretical model. The proposed model extends the IJSM (Akhtar and Lee, 2010) by including WFC, resilience, burnout, and an intention to quit. Literature suggests these elements are important; however, no study had examined their relationships using the extended conceptualisation of job demands and job resources.

Studies suggest WFC has a detrimental impact on GPs (Ádám et al., 2008, Rout, 1996). For instance, Swanson and colleagues (1998) found WFC to be a significant source of stress for GPs, having a greater influence on their wellbeing, relative to their specialist counterparts.

Resilience is important within general practice because resilient individuals adapt to, and cope with stressful situations (Jensen et al., 2008, Berg and Van Brockern, 1995). Cooke and colleagues (2013) found resilience was associated with decreased stress levels, with resilient GPs less susceptible to burnout.

Although they found resilience decreased GP susceptibility to burnout, the associated measures of job demands and burnout itself were not as comprehensive as those used in this study.

Burnout is a significant issue within general practice (Adzic et al., 2013). It can diminish physician health (Shirom and Melamed, 2005), increase medical errors (Firth-Cozens and Greenhalgh, 1997), and increase an intention to leave the profession (Scott et al., 2006).

Intention to quit is important within general practice as it reflects GPs' job satisfaction, and has implications for fellow GPs and patients (Scott et al., 2006). If a GP ceases practicing, their workload is indirectly passed to other GPs (Brett et al., 2009), potentially delaying patient care. Simoens and colleagues (2002) found a considerable proportion of principal and non-principal GPs believed they would be leaving their current practice or the profession within two years. Similarly Scott and colleagues (2006) found the primary factors related to GP intention to quit were low job satisfaction and autonomy.

This overview of previous literature demonstrates two key points. First, WFC, resilience, burnout and an intention to quit are important within general practice. Second, no study had incorporated these constructs to investigate the influence of resilience on burnout and an intention to quit among GPs. By using a more comprehensive conceptualisation of job demands and job resources, the proposed model is stronger than its predecessors.

5.4.2 Directionality of Research Constructs

As discussed (see Section 3.4.1.2), PLS largely involves the consideration of structural paths between constructs, rather than relationships between the scales and the constructs (Hair et al., 1998, Hair et al., 2006). Within this study, scales previously treated as reflective were considered as formative, given the direction of the relationship between the scales items and construct (Jarvis et al., 2003). These include the job control scale (Dwyer and Ganster, 1991), the supervisory support scale (Karasek, 1979), psychological demands scale (Karasek, 1979), the role conflict scale (Rizzo et al., 1970), and the WFC scale (Carlson et al., 2000).

Job resources were measured using the job control scale (Dwyer and Ganster, 1991) and the supervisory support scale (Karasek, 1979), both of which are typically analysed as reflective measures (Akhtar and Lee, 2010). However according to the criteria established by Jarvis and colleagues (2003), both items are formative in nature as the direction of causality flows from the items to the latent variable. In addition, as each item measures a different contributor, the removing of one item would result in incomplete measurements being obtained, this not representative of the latent variable.

In this study, job demands were measured by the psychological job demands (Karasek, 1979) and role conflict scales (Rizzo et al., 1970). Both are typically treated as reflective measures, suggesting that scale items reflect the construct they measure (Akhtar and Lee, 2010, Li et al., 2004, Bakker et al., 2004, e.g. Demerouti et al., 2001c, Rizzo et al., 1970, Celik, 2013, Valentine et al., 2010, Ho et al., 1997, Everly et al., 2011). However, according to Jarvis and colleagues (2003), as detailed in section 3.4.1.2, both scales are formative and were treated as such in this study. Traditionally the role conflict scale has also been treated as a reflective measure (Rizzo et al., 1970, Celik, 2013, Valentine et al., 2010, Ho et al., 1997, Everly et al., 2011). According to the criteria established by Jarvis and colleagues (2003), the role conflict scale is formative due to the directionality between the measurement items and the construct, as well as the lack of inter-changeability of the measurement items.

The WFC scale (Carlson et al., 2000) was treated as a formative scale. Within the scale, each item refers to a different component of WFC from a different domain and therefore the deletion of any item skews WFC. According to Jarvis and colleagues (2003), the absence of interchangeable items fulfils a primary criterion for a formative scale. Traditionally this scale has also been analysed in a reflective manner (Farquharson et al., 2012, Rotondo et al., 2003, Ohta et al., 2011, e.g. Carlson et al., 2000). However under the criteria established by Jarvis and colleagues, WFC is measured and analysed as a formative construct.

To better understand the situation, it is important to appropriately examine the relationships between the items and the constructs. Guided by Jarvis and colleagues (2003), the nature of the scales measuring job control, supervisory support, psychological job demands, role conflict and WFC are all formative.

Therefore by analysing them accordingly, a better representation of the situation can be gained.

5.5 Practical Implications

Results from this study provide meaningful insights into GP experiences. These open opportunities to identify ways to support and sustain their important role in society. The practical implications associated with the findings are explicated as follows.

5.5.1 Importance of Job Resources

This study suggests job resources are important to reduce the significance of, and implications associated with job demands. Reflecting previous research (Bakker and Demerouti, 2007), the quantitative and qualitative aspects of the study suggest job resources can significantly reduce job demands and improve resilience. Accordingly, as job demands reduce, so do WFC and burnout (Montgomery et al., 2006a).

Job resources are also negatively related to WFC and burnout. These findings suggest that as individuals gain greater control over their work, and feel an increased level of supervisory support, they are better equipped to face the challenges of general practice. This increased level of resources enables GPs to take control of their work demands, ensuring they are not over exposed to burnout inducing situations, while avoiding any potential for WFC to generate.

In this study, job demands were shown to be positively related to WFC and burnout, which can be detrimental to the GP. Because job demands intensify the significance and frequency of WFC and burnout, decreasing these demands is likely to benefit the GP. As demonstrated by the qualitative accounts, this can be achieved by increasing GP access to support networks, flexible work arrangements, and supervisory/managerial support. By decreasing job demands, WFC and burnout are likely to reduce.

5.5.2 Influence of Work-Family Conflict

This study suggests that WFC can lead to burnout among GPs. With greater work-related demands, like an increased workload, bureaucratic demands, and difficult patient interactions, GPs require greater resources to meet these

demands. This might involve reducing the time and energy they might otherwise allocate to their personal life (Chaoping et al., 2003, Montgomery et al., 2006a). This in turn can incite WIF. Alternatively, when a GP's personal life requires relatively greater time and energy, FIW may result. Prolonged exposure to WFC can exacerbate burnout (Ádám et al., 2008). However, findings from this study suggest increased supervisory/managerial support and flexible working conditions can help GPs to simultaneously manage their professional and personal lives, thus reducing the likelihood of WFC.

Through appropriate levels of flexible working conditions and managerial support, WFC can be averted. One interviewee recounted when her practice held a weekend getaway for the practice staff and their families. This encouraged practice members to become more involved in each other's lives resulting in increased understanding of the non-work related responsibilities of GPs. Additionally such events could be perceived as the practice showing concern for their staff's family, further avoiding WIF.

5.5.3 Implications for Resilience

According to this study, GP resilience does not significantly influence levels of job demands. This suggests training and education to increase GP resilience may have limited impact on burnout or their intention to quit the profession. Given the findings from this study, alternative efforts would be better spent on increasing GP access to job resources. These would help to reduce job demands, and thus reduce the likelihood of burnout and an intention to quit. Additionally, job resources are positively associated with resilience.

Although resilience was not negatively correlated with burnout, studies suggest resilience can promote wellbeing (Chang et al., 1997, Tugade and Frederickson, 2004, Tugade et al., 2004, Goldman et al., 1996). Although not a direct hypothesis of the current study, it is no doubt a significant consideration before underestimating the beneficial influence resilience can have for GPs.

Although resilience is related to low levels of WFC, this study has shown that it has no direct impact on levels of GP burnout. This study found job resources to be of greater significance to burnout, relative to resilience. Thus, to minimise WFC, burnout and an intention to quit, efforts would be better spent

on increasing social and supervisory support, as well as establishing flexible working conditions, rather than developing programs to optimise GP resilience.

5.5.4 Implications for Burnout

In this study, GPs who experience burnout were more likely to intend to quit the profession. As they experience prolonged emotional exhaustion, depersonalisation, and reduced job satisfaction, they may not recognise any benefit in the stress they experience. As such, they may consider ways to escape their demanding workplace (Scott et al., 2006). According to some interviewees, this leads some GPs to withdraw from discretionary responsibilities or the profession.

Burnout can have serious implications for GPs and their patients. GPs are likely to experience poor wellbeing; furthermore, they may deliver substandard care (Adzic et al., 2013, Halbesleben and Rathert, 2008). As suggested by some interviewees, GPs who experience burnout tend to depersonalise patients, distancing themselves from patient demands. This in turn may compromise quality patient care. As GPs experience burnout, they may consider ways to alleviate the demands they experience (Simoens et al., 2002). They may reduce their practice hours or leave general practice (Scott et al., 2006). This in turn can place a greater workload on remaining GPs, intensifying their workplace demands.

As suggested, job demands and WFC are both positively related to burnout. To avert burnout, consideration should be placed into reducing levels of job demands and WFC. This study has suggested that job resources can reduce these factors, in particular levels of supervisor support and the availability of flexible work conditions. Through increasing the availability of these resources, corresponding benefits are expected in terms of reduced job demands and WFC. Therefore to avert the consequences of burnout, GP principals and practice managers should maximise the availability and significance of these job resources.

According to some interviewees, their level of exhaustion, and therefore burnout, could be beneficially influenced by more sustainable patient scheduling. Through allowing GPs a small window of time between patients

they will be better able to deal the psychological tolls of general practice. The interviewees concerned indicated that they used this short break to either document patient consultations or debrief with fellow GPs to ensure they were prepared for the next patient. If this strategy was adopted, levels of emotional exhaustion and therefore burnout would be likely to decrease.

5.6 Limitations

Despite the value of the findings reported in this study, three limitations warrant mention. These include limited consistency in the ways the quantitative and qualitative data were collected; the limited generalisability of the findings; and the impact of low response rates. Each is addressed in turn.

As discussed in chapter 3, the recruitment of survey participants was complex. Initially, DGP/MLs were invited to promote the study to GP members, however their levels of commitment were inconsistent. Although the DGPs/MLs included the same brief in their newsletters, additional efforts (e.g. handouts at DGP training initiatives) were not consistent. AMPCo and the UWS School of Medicine directly invited potential participants via email. Although these different approaches were required to attain a sufficient sample size, the inconsistent recruitment methods may have influenced the distribution of GPs in the sample. As the recruitment methods were not standardised, potential participants did not have the same participation opportunities. This is important as different geographical areas have different GP levels, common conditions and socio-economic norms, all of which would influence the workload of the GP.

The qualitative data were collected using a semi-structured interview schedule. Although this helped to elicit rich responses, the depth of explanation provided by the interviewees were inconsistent. The interview schedule guided the conversation to ensure the most important areas were covered, but additional information was provided at the interviewees' discretion. The level of inconsistency can be an indication of the motives of the participants. For example when a participant was highly stressed, potentially experiencing burnout, their depth of response would be influenced by their current frame of

mind. This could lead to the inaccurate recounts and therefore representations in this study.

The findings of this study may not be generalisable to other GPs, including those in Australia. This is because the participants do not constitute a representative sample (Britt et al., 2013). According to the Australian Bureau of Statistics (ABS) (2013), the main areas of difference are gender and age distribution. The gender distribution of the sample is almost in reverse to the population, which has impacts when considering the implications this has on position within the practice, hours worked and non-work related responsibilities. According to the ABS 57% of GPs are male, however within this current sample only 46.6% were male. The main point of difference is in the age distribution, however according to the ABS only 29 % of practicing GPs are over 50 years of age, however within the sample that figure was 52.5%. This is significant when the complemented with retirement intentions, the age discrepancy within prevalence of burnout as well as the associated seniority and possibly managerial obligations within the practice.

The voluntary nature of participation and the reliance on self-reports raise the potential for response bias. According to Aitken and colleagues (2008), GPs largely participate in found that one of the main motives behind GP participation with online surveys is the perceived importance of the topic. Therefore participants would need to have seen the issues covered in this study of importance to participate. If this interest is based on past experiences of burnout, WFC or intention to quit, a response bias may be present.

Intent to quit the profession was measured by a two-item scale formulated by Begley and Czajka (1993). The scale was chose in efforts to limit survey length and was deemed a viable alternative due to its previously published high levels of reliability and validity. In addition, due to the method of analysis, SmartPLS can analyse scales with small item sizes. Within this context, the scale's reliability and validity was just as strong as anticipated. Despite this perhaps a scale containing a few more items would be considered more favourable.

The highlighted limitations could have been averted through stronger recruitment measures. To increase the potential of recruiting a generalisable

sample, recruitment should be standardised with consideration to controls in terms of gender and geographical locations. Consistent recruitment techniques will avert potential bias response rates with all participants being provided the same material via the same method. This would also ensure that all geographical areas have consistent participation opportunities. These measures were not feasible for this study due to financial constraints. To access the participant number required, with moderation for gender and geographical distribution, a specialist survey recruitment firm would be required that is incompatible with the financial assistance provided. More information on WFC could be found by complementing the GP survey responses with data collected directly from their spouses, similar to methods adopted by Rout's (1996) study on British GPs.

5.7 Future Research

Building on this study, this section identifies three avenues for future research that can help to reduce GP burnout. First, research is required to identify the specific resources that have most influence on job demands. Although resilience had a beneficial relationship with job resources and low levels of WFC, the anticipated benefits regarding burnout were not supported. As job resources were negatively associated with job demands, job resources still play an important role in minimising the drivers for burnout. Identifying those resources that have a demonstrated impact on job demands may help GPs to ensure the efficient use of limited resources and better manage their job demands. This in turn could circumvent burnout, and an intention to quit the profession.

Second, the proposed model could be extended to include other relevant constructs to better understand workplace stress. For instance, emotional intelligence (EI) (Salovey and Mayer, 1990, Mayer and Salovey, 1997), personality type (e.g. McCrae and Costa, 2004), and psychological capital (Luthans et al., 2004) are said to influence the effect of the job-related demands, akin to that hypothesised with resilience (Oginska-Bulik, 2005, Duran et al., 2004, Slaski and Cartwright, 2003). Adding these to the proposed

model, and testing this extended model, may help to determine whether and how they influence the demands of general practice, relative to (and/or when combined with) resilience. Following previous studies on EI training programs (Slaski and Cartwright, 2003), findings from this research may inform future training and support programs to circumvent GP burnout and an intention to quit the profession.

Third, research is required to better understand the factors that reduce personal accomplishment among GPs. Participants offered several reasons for their reduced sense of achievement, including changes in patient expectation. A better understanding of these could unveil opportunities to restore (if not improve) the sense of accomplishment GPs experience.

Finally, research is required to illuminate any linkage that resilience may have levels of GP job satisfaction. Although overlooked in the current study, job satisfaction may be a signal of deeper or future issues that would be helpful to identify. Research which looks at factors that optimise job satisfaction would ultimately pose great benefits in prolonging the clinical careers of GPs.

5.8 Conclusion

This chapter has discussed the research findings. Overall, sufficient evidence was found to support nine of the 11 hypothesised relationships (see Table 5.1). Job resources were negatively related to job demands, WFC and burnout, while positively associated with resilience. Job demands were positively related to WFC and burnout. Resilience was shown to be associated with low levels of WFC. Additionally, WFC was associated with experiences of burnout, which is strongly related to an intention to quit the profession. Resilience had no significant association with job demands, or burnout.

The chapter then detailed the theoretical contributions of this study. This study is the first to use the IJSM to understand burnout formation within general practice. Additionally, a new path model was proposed to determine the influence of resilience on burnout and an intention to quit the profession. Finally, to optimise the accuracy of the findings, this study investigated the direction of the relationships between the scale items and the construct.

Following this, the practical implications were outlined with particular reference to job resources, WFC, resilience, and burnout. The study suggests that job resources were the main component that diminished burnout and WFC. Thus, rather than developing initiatives to bolster resilience, it would be preferable to ensure adequate resources. WFC was significantly associated with burnout. As GPs experience burnout, they may seek ways to reduce the demands they experience, which in some cases will include reducing their practice-related responsibilities.

The chapter concludes by presenting clear direction for future research. Building on these findings, research is needed to identify the importance of specific job resources to minimise burnout, identify the influence of EI personality type, and psychological capital on burnout and an intention to quit, as well as clarifying the factors that contribute to a reduced sense of accomplishment. This research can help to understand GP stress, and ultimately improve GP wellbeing and patient care.

The demands GPs experience can cause stress and burnout. Research suggests that burnout can diminish wellbeing, reduce the quality of patient care, and incite an intention to quit the profession. Contrary to expectation, in this study it has been shown that resilience was not associated with reduced burnout. Instead it has illustrated that job resources are negatively associated with job demands, WFC, burnout, and an intention to quit the profession. Therefore, to address these problems, increased levels of job resources are required. Job resources greatly reduced job demands, having implications for WFC and burnout. According to some interviewees, the resources that have helped them to deal with practice-related issues are supervisor and collegial support, as well as flexible working arrangements. With these resources, they were less affected by the demands they experienced.

Through reducing levels of GP stress, burnout and intention to quit, GPs will be able to provide a sustainably high level of care to their patients and fulfil their role within the wider medical system. As the levels of GP strain are reduced, it is anticipated that GPs will be able to continue practicing till their natural retirement age, thus increasing the supply of GPs. Additionally, this trend should see general practice lose the stigma of being a highly stressful

element of the health system therefore increasing its attractiveness to medical students.

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Appendices

Appendix 1 – Survey

Demographic Information

Age	<input type="checkbox"/> 21- 30 years <input type="checkbox"/> 31-40 years <input type="checkbox"/> 41-50 years <input type="checkbox"/> 51-60 years <input type="checkbox"/> 60 years +
Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female
Marital status	<input type="checkbox"/> Single <input type="checkbox"/> Married <input type="checkbox"/> De facto
Number of dependent children	
Year of graduation	
Years in general practice	
Which General Practice Division are you associated with?	
Number of GPs (fulltime equivalent) within your practice	
Number of Practice Nurses (fulltime equivalent) within your practice	
Approximate number of patients seen per week	<input type="checkbox"/> 1-10 Patients <input type="checkbox"/> 41-50 Patients <input type="checkbox"/> 11-20 Patients <input type="checkbox"/> 51-60 Patients <input type="checkbox"/> 21-30 Patients <input type="checkbox"/> 61-70 Patients <input type="checkbox"/> 31-40 Patients <input type="checkbox"/> 70 + Patients

Resilience

Please read the following statements. To the right of each you will find seven numbers, ranging from “1” (Strongly Disagree) on the left to “7” (Strongly Agree) on the right. Circle the number which best indicates your feelings about that statement. For example, if you strongly disagree with a statement, circle “1”. If you are neutral, circle “4”, and if you strongly agree, circle “7”, etc.

	Strongly Disagree						Strongly Agree
1. When I make plans, I follow through with them	1	2	3	4	5	6	7
2. I usually manage one way or another	1	2	3	4	5	6	7
3. I am able to depend on myself more than anyone else	1	2	3	4	5	6	7
4. Keeping interested in things is important to me	1	2	3	4	5	6	7
5. I can be on my own if I have to	1	2	3	4	5	6	7
6. I feel proud that I have accomplished things in life	1	2	3	4	5	6	7
7. I usually take things in stride	1	2	3	4	5	6	7
8. I am friends with myself	1	2	3	4	5	6	7
9. I feel that I can handle many things at a time	1	2	3	4	5	6	7
10. I am determined	1	2	3	4	5	6	7
11. I seldom wonder what the point of it all is	1	2	3	4	5	6	7
12. I take things one day at a time	1	2	3	4	5	6	7
13. I can get through difficult times because I’ve experienced difficulty before	1	2	3	4	5	6	7
14. I have self-discipline	1	2	3	4	5	6	7
15. I keep interested in things	1	2	3	4	5	6	7
16. I can usually find something to laugh about	1	2	3	4	5	6	7
17. My belief in myself gets me through hard times	1	2	3	4	5	6	7
18. In an emergency, I’m someone people can generally rely on	1	2	3	4	5	6	7
19. I can usually look at a situation in a number of ways	1	2	3	4	5	6	7
20. Sometimes I make myself do things whether I want to or not	1	2	3	4	5	6	7
21. My life has meaning	1	2	3	4	5	6	7
22. I do not dwell on things that I can’t do anything about	1	2	3	4	5	6	7
23. When I’m in a difficult situation, I can usually find my way out of it	1	2	3	4	5	6	7
24. I have enough energy to do what I have to do	1	2	3	4	5	6	7
25. It’s okay if there are people who don’t like me	1	2	3	4	5	6	7
26. I am resilient	1	2	3	4	5	6	7

Job Demands

Please read the following statements. To the right of each you will find four numbers, ranging from “1” (Strongly Disagree) on the left to “4” (Strongly Agree) on the right. Circle the number which best indicates your feelings about that statement. For example, if you strongly disagree with a statement, circle “1” and if you strongly agree, circle “4”.

	Strongly Disagree			Strongly Agree
1. My job requires working very fast	1	2	3	4
2. My job requires working very hard	1	2	3	4
3. I am not asked to do an excessive amount of work	1	2	3	4
4. I have enough time to get the job done	1	2	3	4
5. I am free from conflicting demands others make	1	2	3	4
6. My job requires long periods of intense concentration on the task	1	2	3	4
7. My tasks are often interrupted before they can be completed, requiring attention at a later time	1	2	3	4
8. My job is very hectic	1	2	3	4
9. Waiting on work from other people or departments often slows me down on my job	1	2	3	4

Role Conflict

Please read the following statements and plot your response on the scale provided. (1=Very False, 7= Very True). For example, if you strongly disagree with a statement, circle “1”. If you are neutral, circle “4”, and if you strongly agree, circle “7”, etc.

	Very False						Very True
1. I have to do things that should be done differently	1	2	3	4	5	6	7
2. I received an assignment without the manpower to complete it	1	2	3	4	5	6	7
3. I have to buck a rule or policy in order to carry out assignments	1	2	3	4	5	6	7
4. I work with two or more groups who operate quite differently	1	2	3	4	5	6	7
5. I receive incompatible requests from two or more people	1	2	3	4	5	6	7
6. I do things that are apt to be accepted by one person and not accepted by others	1	2	3	4	5	6	7
7. I receive an assignment without adequate resources and materials to execute it	1	2	3	4	5	6	7
8. I work on unnecessary things	1	2	3	4	5	6	7

Job Resources

Below are listed a number of statements which could be used to describe a job. Please read each statement carefully and indicate the extent to which each is an accurate or an inaccurate description of your job by indicating the appropriate number for each statement.

	Very Little				Very Much
1. How much control do you have over the variety of methods you use in completing your work?	1	2	3	4	5
2. How much can you choose among a variety of tasks or projects to do?	1	2	3	4	5
3. How much control do you have personally over the quality of your work?	1	2	3	4	5
4. How much can you generally predict the amount of work you will have to do on any given day?	1	2	3	4	5
5. How much control do you have personally over how much work you get done?	1	2	3	4	5
6. How much control do you have over how quickly or slowly you have to work?	1	2	3	4	5
7. How much control do you have over the scheduling and duration of your rest breaks?	1	2	3	4	5
8. How much control do you have over when you come to work and leave?	1	2	3	4	5
9. How much control do you have over when you take vacations or days off?	1	2	3	4	5
10. How much are you able to predict what the results of decisions you make on the job will be?	1	2	3	4	5
11. How much are you able to decorate, rearrange, or personalize your work area?	1	2	3	4	5
12. How much can you control the physical conditions of your work station (lighting, temperature)?	1	2	3	4	5
13. How much control do you have over how you do your work?	1	2	3	4	5
14. How much can you control when and how much you interact with others at work?	1	2	3	4	5
15. How much influence do you have over the policies and procedures in your work unit?	1	2	3	4	5
16. How much control do you have over the sources of information you need to do your job?	1	2	3	4	5
17. How much are things that affect you at work predictable, even if you can't directly control them?	1	2	3	4	5
18. How much control do you have over the amount of resources (tools, material) you get?	1	2	3	4	5
19. How much can you control the number of times you are interrupted while you work?	1	2	3	4	5
20. How much control do you have over the amount you earn at your job?	1	2	3	4	5
21. How much control do you have over how your work is evaluated?	1	2	3	4	5
22. In general, how much overall control do you have over work and work-related matters?	1	2	3	4	5

Supervisory Support

Please read the following statements and plot your response on the scale provided. (1=Strongly Disagree, 7=Strongly Agree). If you have no supervisor please circle '5'.

	Strongly Disagree			Strongly Agree	I Have No Supervisor
1. My supervisor is concerned about the welfare of those under him	1	2	3	4	5
2. My supervisor pays attention to what I am saying	1	2	3	4	5
3. I am exposed to hostility or conflict from my supervisor	1	2	3	4	5
4. My supervisor is helpful in getting the job done	1	2	3	4	5
5. My supervisor is successful in getting people to work together	1	2	3	4	5

Burnout

Please rate the occurrence or frequency of these below statements in your own life. (5=Always or To a very high degree, 1= Never / Almost never or To a very low degree).

	Always or to a very high degree				Almost never or to a very low degree
1. How often do you feel tired?	5	4	3	2	1
2. How often are you physically exhausted?	5	4	3	2	1
3. How often are you emotionally exhausted?	5	4	3	2	1
4. How often do you think "I can't take it anymore"?	5	4	3	2	1
5. How often do you feel worn out?	5	4	3	2	1
6. How often do you feel weak and susceptible to illness?	5	4	3	2	1
7. Do you feel worn out at the end of the working day?	5	4	3	2	1
8. Are you exhausted in the morning at the thought of another day at work?	5	4	3	2	1
9. Do you feel that every working hour is tiring for you?	5	4	3	2	1
10. Do you have enough energy for family and friends during leisure time?	5	4	3	2	1
11. Is your work emotionally exhausting?	5	4	3	2	1
12. Does your work frustrate you?	5	4	3	2	1
13. Do you feel burnt out because of your work?	5	4	3	2	1
14. Do you find it hard to work with clients?	5	4	3	2	1
15. Does it drain your energy to work with clients?	5	4	3	2	1
16. Do you find it frustrating to work with clients?	5	4	3	2	1
17. Do you feel that you give more than you get back when you work with clients?	5	4	3	2	1
18. Are you tired of working with clients?	5	4	3	2	1
19. Do you sometimes wonder how long you will be able to continue working with clients?	5	4	3	2	1

Work-Family Conflict

On the scale below, please circle the appropriate response.

	Never				Constantly
1. My work keeps me from my family activities more than I would like	1	2	3	4	5
2. The time I must devote to my job keeps me from participating equally in household responsibilities and activities	1	2	3	4	5
3. I have to miss family activities due to the amount of time I must spend on work responsibilities	1	2	3	4	5
4. The time I spend on family responsibilities often interfere with my work responsibilities	1	2	3	4	5
5. The time I spend with my family often causes me not to spend time in activities at work that could be helpful to my career	1	2	3	4	5
6. I have to miss work activities due to the amount of time I must spend on family responsibilities	1	2	3	4	5
7. When I get home from work I am often too frazzled to participate in family activities/responsibilities	1	2	3	4	5
8. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family	1	2	3	4	5
9. Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy	1	2	3	4	5
10. Due to stress at home, I am often preoccupied with family matters at work	1	2	3	4	5
11. Because I am often stressed from family responsibilities, I have a hard time concentrating on my work	1	2	3	4	5
12. Tension and anxiety from my family life often weakens my ability to do my job	1	2	3	4	5
13. The problem-solving behaviors I use in my job are not effective in resolving problems at home	1	2	3	4	5
14. Behavior that is effective and necessary for me at work would be counterproductive at home	1	2	3	4	5
15. The behaviors I perform that make me effective at work do not help me to be a better parent and spouse	1	2	3	4	5
16. The behaviors that work for me at home do not seem to be effective at work	1	2	3	4	5
17. Behavior that is effective and necessary for me at home would be counterproductive at work	1	2	3	4	5
18. The problem-solving behavior that work for me at home does not seem to be as useful at work	1	2	3	4	5

Intention to Quit

Please read each statement carefully and indicate the extent to which each is an accurate or an inaccurate description of your experience by circling the appropriate number.

	Strongly Disagree						Strongly Agree
As soon as I can find a better job, I'll quit	1	2	3	4	5	6	7
I often think about quitting my job	1	2	3	4	5	6	7

Thank you for taking the time to complete the survey

Appendix 2 – Interview Schedule

- 1. What, if anything, do you find stressful about general practice?**
 - a. Describe some recent examples (that pertain to:
 - i. Patient care
 - ii. Accreditation processes
 - iii. Adherence to evidence-based practices
 - iv. Organisational practices – for instance, patient appointments
 - v. Medico-legal issues
- 2. Why do you think you find these stressful?**
 - a. What is particularly stressful about (see above)?
 - b. What concerns you about this?
- 3. What impact has this stress had on your life (or mental wellbeing)?**
 - a. What tells you that this causes you stress – how do you know that these are stressful for you?
 - b. How does it affect your capacity to work as a GP?
 - c. How does it affect the time you spend outside of the practice – for instance, with family?
 - d. How does it affect your mental health?
 - e. How does it affect your physical health?
 - f. Would you describe this as burnout?
- 4. What do you think worsens this experience?**
 - a. What aspects of your work aggravate the stress?
 - b. What aspects of your home-life aggravate the stress?
- 5. What helps you to manage this stress?**
 - a. What practical strategies do you use – at work or at home – to alleviate or manage the stress?
 - b. What strategies does your practice use to help staff manage stress?
- 6. Overall has your experience as a GP lived up to your expectations?**
 - a. Has it exceeded/fallen short?
 - b. How and why?