Employee Perceptions of High Involvement Work Practices and Burnout in Health Care: A Conservation of Resources Theory Perspective

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Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy is entirely my own work, and that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

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Table of Contents

List of Tables

List of Figures

Employee Perceptions of High Involvement Work Practices and Burnout in Health Care: A Conservation of Resources Theory Perspective

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Abstract

The impact of high involvement work practices (HIWPs) on employee well-being outcomes is unclear as the research evidence records both positive and negative effects. However, the majority of research studies have examined the impact of HIWPs on positive well-being outcomes with scant research dedicated to examining their influence on employees health related outcomes such as burnout. Another major research gap concerns the lack of theorising and empirical work dedicated to understanding the relationship between HIWPs and well-being. This thesis introduces the very relevant and timely Conservation of Resources (COR) theory from the occupational health psychology literature to the research on HIWPs in order to explain the underlying mechanisms through which HIWPs influences a critical well-being outcome i.e. burnout (emotional exhaustion and depersonalisation). Specifically, using data from Canadian hospitals, the author tested the HIWPs-burnout link and possible mediators in three research studies. Study 1 employed a cross-sectional design in a Canadian hospital and showed that perceived HIWPs are directly and indirectly associated with lower burnout via job demands (role conflict and role overload). Study 2 employed a time lagged research design and demonstrated that perceived HIWPs do not directly impact burnout three years later. Rather, the effect of HIWPs on burnout is fully mediated by person-organisation fit. Finally, Study 3 which sampled nurses, investigated and found support for the simultaneous mediating role of a job resource (procedural justice) and job demand (role overload) in the HIWPs-burnout relationship. Further, colleague support moderated the effects of these mediators on emotional exhaustion but not depersonalisation. Overall, the three presented studies demonstrate support for the positive effects of HIWPs in the health care context while theoretically and empirically depicting the underlying mechanisms for this relationship. The implications for research and practice are illustrated by highlighting the importance of HIWPs as a critical resource for employees.

Chapter One

Introduction

1.1 Introduction

Significant challenges face health care organisations as a result of policy reforms which have resulted in the introduction of new technology, cost cutting, and market mechanisms to the health care sector (e.g. Townsend & Wilkinson, 2010). As a result, the human resource function in the hospital based public sector is faced with overcoming such challenges while ensuring that employee well-being is maintained. However, very few studies have directly examined the role of Human Resource (HR) practices as a solution to many of the challenges confronting health care sector organisations (e.g. Buchan, 2004). This is particularly the case when considering challenges such as the declining nature of employees' well-being (Baptiste, 2008). The declining nature of well-being among health care workers is due to many factors such as, for example, their extremely high workload and emotionally demanding interactions with patients (De Prielle, van der Velde & Smeets, 2010). This ensures that work related stress cannot be easily turned off when employees go home (van der Heijden, Demerouti, Bakker & Hasselhorn, 2008). In this thesis, the author seeks to examine the potential role of employee perceptions of high involvement work practices (HIWPs) as one solution to addressing problems related to employee burnout. Burnout is defined by Maslach (1982) as "a syndrome of emotional exhaustion, depersonalisation, and reduced personal accomplishment" (p. 3). Emotional exhaustion is a chronic state charactersited by being overloaded, overextended and depleted of one's energetic and emotional resources. Depersonalisation (also known as cynicism or disengagement) is characterised by a negative or cynical attitude towards people and work tasks. Reduced personal accomplishment (also known as personal efficacy) reflects a decline in ones feelings of competence on the job.

Emotional exhaustion and depersonalisation are considered to be the two core symptoms of burnout (Shirom, 2010), and will be the focus of this investigation. Reduced personal accomplishment is viewed to be independent of these core dimensions and more reflective of a personality trait similar to self-efficacy (Cordes & Dougherty, 1993). Research demonstrates that burnout in particular is a chronic problem for health care employees (e.g. Aiken, Clarke, Sloane, Sochalski & Silber, 2002; Maslach, Schaufeli & Leiter, 2001) and has negative ramifications for the quality of patient care delivered (e.g. Altum, 2002; Wood & Killion, 2007). HIWPs are receiving increasing research attention in the health care sector given that their use is prevalent in the most effective hospitals, often called magnet status hospitals, in the United States (US) (Rondeau & Wagar, 2006). Their use are believed to complement other management innovations in health care, for example, the patient centered care (PCC) model of delivering care which improves patient outcomes (Avgar, Givan & Liu, 2011).

The interest in high involvement among academics and practitioners is mainly due to their ability to promote desirable attitudes and behaviours among employees such as increased commitment, job satisfaction and lower quit intentions (e.g. Butts, Vandenberg, Dejoy, Schaffer & Wilson, 2009; Vandenberg, Richardson & Eastman, 1999). This optimistic or 'mainstream' perspective regarding the impact of HIWPs has unitarist assumptions and assumes that HIWPs are good for workers and organisations (e.g. Harley, Allen & Sargent, 2007). On the other hand, a number of authors have argued that HIWPs can intensify employees' job demands and have negative effects on their well-being (e.g. Kroon, Van de Voorde & van Veldhoven, 2009; Wood, van Veldhoven, Croon & de Menezes, 2012). This latter argument is consistent with labour process theory (Braverman, 1974) and the critical management-by-stress perspective which argues that the added responsibility and work intensification associated with discretion arising from HIWPs is believed to cause stress

(Wood et al., 2012). Despite the claims made by the advocates and critics of HIWPs, surprisingly little attention has been paid to understanding whether HR has positive or negative effects on employee well-being outcomes (Macky & Boxall, 2008; Peccei, 2004; Wood et al. 2012). Indeed, despite the major on-going debate over the impact of HR practices on firm performance, less research has actually focused on the effects of HIWPs on employee well-being (Paauwe, 2009; Peccei, Van de Voorde & van Veldhoven, 2013; Peccei, 2004; Wood et al., 2012). This is an important oversight as any influence that HIWPs are likely to have on performance must work through employees' attitudes and behaviours as well as their well-being (e.g. Bowen & Ostroff, 2004; Nishii, Lepak & Schneider, 2008; Paauwe, 2009). Consequently, in order to contribute to the wider debate regarding the impact of HR practices on employee well-being, further investigation of the relationship between HR and burnout will assist in resolving a key debate in HRM, specifically in the health care context (e.g. Harley et al., 2007). This is will have broader policy implications for health care managers.

In addition to the lack of research examining the impact of HR practices on employee well-being outcomes, Peccei et al. (2013) observed that there has been a serious lack of theorising and empirical research dedicated to understanding the HR-well-being relationship. In other words, HRM scholars still lack an understanding of how and why HR practices influence well-being outcomes. A number of studies in recent years have examined the role of job demands and resources as potential explanatory variables in the HRM-well-being relationship. Using the Job-Demands Control (JD-C) model (Karasek, 1979) in order to posit a negative relationship between HIWPs and burnout, Castanheira and Chambel (2010) revealed that HIWPs were associated with lower job demands, which in turn lowered employees' experience of burnout. Conversely, Kroon et al.'s. (2009) results revealed that high performance work practices (HPWP) increased job demands, which in turn increased employees' experience of burnout. Some of these inconsistent and conflicting results in the

HR field demonstrate the need to further investigate the HR-burnout relationship. However, in addition to testing the direct effects of HIWPs on employee burnout, research devoted to understanding how and why perceptions of HR practices influence burnout is likely to provide further insights into how HIWPs actually work (Butts et al., 2009). In other words, there is a need to go beyond examining relationships between HR and well-being outcomes and move towards examining underlying mechanisms that explain this link. This issue was realised over a decade ago when scholars began to address the 'black box' problem in understanding the linkages between HRM and organisational performance (e.g. Guest, 2011). The inclusion of a broader range of job demands and resources should receive further investigation in explaining the relationship between HR and well-being outcomes according to some scholars (Castanheira & Chambel, 2010; Peccei et al., 2013).

Building on these research calls and recommendations, the purpose of this thesis is to identify and test the relevance of job demands and resources relevant to health care employees as mediators of the HIWPs and burnout relationship. In doing so, and with the aim of contributing to the lack of theorising in the HIWPs-well-being link, it adopts the Conservation of Resources Theory (COR) (Hobfoll, 1989), from the occupational health psychology literature to underpin the research hypotheses.

In summary, there has been a lack of studies that investigate the impact of HR practices on employee well-being outcomes and the underlying mechanisms in the health care context (Baptiste, 2008; Harley et al., 2007). Given the pervasive problem of burnout in the health care context (Maslach et al., 2001), understanding if and how HIWPs can alleviate its occurrence will have broader theoretical and practical implications.

1.1.1 Aims and Objectives

This present thesis aims to provide scholars and practitioners with a better understanding of the relationship between employees' perceptions of HIWPs and burnout in the health context. The Conservation of Resources (COR) theory (Hobfoll, 1989) is adopted from the occupational health psychology literature to examine the impact of employees' perceptions of HIWPs on employee burnout and to explore the underlying linkage mechanisms that explain this relationship. Specifically, the thesis identifies and empirically tests salient job demands and resources as mediators of the HIWPs-burnout relationship. Study 1 examines the effect of HIWPs on burnout via job demands using a cross-sectional research design. Study 2 seeks to add more depth by exploring the impact of HIWPs on long term burnout using a time lagged research design and by investigating the salience of a key resource as a potential mediating factor in this relationship. Study 3 seeks to add additional insights by investigating the simultaneous role of a job demand and resource as mediators of the HIWPs-burnout relationship among a specific occupational group (i.e. nurses) known to score particularly high on burnout. This study also seeks to examine the mediating influence of job demands and resources in greater detail. Specifically, it investigates the extent to which the social context of work also plays a role in burnout reduction by investigating whether colleague support represents a positive resource that moderates the influence of job demands and resources on burnout.

1.1.2 Thesis Outline

The three studies presented in this thesis empirically investigate the impact of employee perceptions of HIWPs on burnout and various job demands and resources that could explain this relationship. Using a cross-sectional research design, Study 1 tests whether perceptions of HIWPs are associated with lower levels of burnout directly and indirectly via job demands (role conflict, role overload and role ambiguity). The sample comprised of 545 employees from a large Canadian hospital. Employing a time lagged research design, Study 2 then examines the impact of employees' perceptions of HIWPs on long term burnout via person-organisation fit. The sample was composed of 185 health care employees who filled in the questionnaire at time 1 and time 2 in the same Canadian hospital. Finally, using cross-sectional data from Canadian nurses, Study 3 investigates the relationship between nurses perceptions of HIWPs and burnout achieved through examination of the simultaneous mediating role of individual job demands (role overload) and resources (procedural justice). Furthermore, it was proposed that colleague support moderates the relationship between these mediators and burnout. The sample consisted of 2,174 nurses working across 105 hospitals in Canada. Prior to presenting the three studies, the author will review the theoretical background of high involvement work practices and the overarching debate and empirical evidence regarding its effects on employee well-being. Following this, the overall research objective and specific research questions which are addressed by the three studies are outlined. This chapter then discusses the methodology underlying the research in terms of its design, administration and analysis. Next, the three studies are formally presented. Finally, the thesis concludes with an overall discussion chapter which evaluates the findings and contribution of the three studies in light of the research questions. Recommendations for future research and management practice will also be presented.

1.2 Theoretical Background

1.2.1 High Involvement Work Practices

High involvement management became popular in the 1980s and was seen as relevant for all organisations to cope with the changing nature of work characterised by intense competition (Wood & de Menezes, 1998). In effect, the movement towards high involvement aimed to reverse the Taylorist ideology of narrow job specifications and centralised decision making with limited worker autonomy (Edwards & Wright, 2001). Lawler (1986) used the term 'high-involvement' to describe management systems based on commitment and involvement, as opposed to the old bureaucratic and hierarchical model based on control. Control management relies on strict rules and procedures in order to increase efficiency and reduce direct labour costs (e.g. Arthur, 1994). In contrast, commitment systems aim to increase effectiveness and productivity and rely on conditions that encourage employees to identify with the goals of the organisation and work hard to accomplish those goals (Wood & de Menezes, 1998; Whitener, 2001). HIWPs are supposed to improve communication flow, foster empowerment and participation, and encourage employees to invest both tangibly and emotionally in their employer (Vandenberg et al., 1999). Batt (2002) suggests that such high involvement work systems generally include: "relatively high skill requirements; work designed so that employees have discretion and opportunity to use their skills in collaboration with other workers; and an incentive structure that enhances motivation and commitment" (p. 587). Scholars share the same idea of high involvement although there is little agreement as to what which practices should be used to develop and measure it (Edwards & Wright, 2001). Typically four types of high involvement practices were included relative to information, training, remuneration and empowerment (Lawler, 1986). The relevance of this list of high involvement practices was validated in 1,000 US companies a few years later (Lawler, 1992).

Other empirical research has led to alternative bundles of high involvement practices. Arthur (1994) in a study of 54 steel companies identifies six types of practices: training, empowerment, high wages, performance-based compensation, collective participation in decisions and skill development. Wood and de Menezes (1998) add recruitment, appraisal systems and job security to the practices previously studied. Despite the wide range of practices used to develop high involvement, authors have stipulated that focusing on the core practices that have been included in the majority of research will be necessary in order to advance the field (Wood & de Menezes, 1998).

In addition to the inconsistencies regarding the practices used for high involvement, little consensus exists regarding the terminology used to define the overall work system (e.g. Edwards & Wright, 2001; Wood, 1999). Indeed, authors have used the terms high performance work practices, high commitment HR practices and high involvement work practices interchangeably (e.g. Boxall & Macky, 2009). This is confusing for research as, depending on the practices included, different sets of systems are likely to have differential effects on employee and organisational outcomes. Recently, Boxall and Macky (2009) make a case for advancing the high involvement stream over the high commitment and high performance work systems approach. They argue that the high involvement terminology is the one best connected to critical workplace changes in high-wage countries and the one most useful for constructing theoretical models of high performance work systems (HPWP). The authors highlight that attempting to define HPWP solely through identifying a set of practices is fundamentally flawed because the choice of practices adopted by a firm will very much depend on the cultural context. In this sense, while some practices are considered as high performing in some countries, in other countries they are simply required by the law. Therefore, given that HPWP generally consist of 'best practices', according to the authors, this approach is limited in terms of adequately justifying the choice of HR system. Defining

high involvement work practices in terms of high commitment HR practices may also be problematic. As noted by Boxall and Macky (2009), high commitment HR practices can be pursued independent of HIWPs. For example, employment practices such as higher pay and job security can be offered as part of a high commitment HRM approach without altering the structure of work, enhancing job autonomy or offering the scope for initiative. As argued by Edwards and Wright (2001), "job security and wages are arguably better seen as underpinnings of HIWPs rather than as constituent elements" (p.570). An important distinction between commitment based HR practices and HIWPs is the mechanism through which these practices exert their influence. While high commitment practices are hypothesised to increase performance by enhancing employee commitment, HIWPs exert their influence by increasing employee discretion (Ramsay, Scholarios & Harley, 2000). However, what differentiates HIWPs from other initiatives is that they provide employees with a system of inclusion that simultaneously embraces the benefits of increased power (P) to make decisions, access to critical information (I), exposure to rewards (R) linking individual performance to organisational outcomes, and increased knowledge (K) opportunity to expand organisational and task related knowledge (Lawler, 1996). This is in short referred to as the PIRK model (Vandenberg et al., 1999). Although different HR practices and systems are used in the wider HR literature, for involvement, consensus is emerging that information sharing, skill development, reward and empowerment together are the core practices for high involvement (Guerrero & Barraud-Didier, 2004). Guerrero and Barraud-Didier (2004) suggest that the core assumption of the high involvement work systems approach is that each employee will increase their involvement in the organisation if they are given the opportunity to control and understand their work. Thus, high involvement consists of gathering intelligence, ideas and the motivation of all workers. According to Lawler (1992), the idea of high involvement is that organisations should be designed in a way that

ensures employees are in control of their destiny and are able to participate in the business of the organisation.

1.2.2 High Involvement Work Practices in the Health Care Context

In addition to the aforementioned theoretical considerations outlined by Boxall and Macky (2009), the authors also point to the importance of linking HIWPs to a broader organisational logic and context. In other words, the choice of HR system should be relevant to the organisational objectives. In this regard the authors cite the reputable study of MacDuffie (1995), who considered HIWPs in response to a change of strategy, from control to one of flexible specialisation. In the study by MacDuffie (1995), it was argued that this required the involvement of employees and subsequent skill development, so that they would be able to effectively meet organisational goals. Consistent with this recommendation by Boxall and Macky (2009), the choice of HR system (HIWPs) in this thesis is partly driven by these contextual influences. In the wider research on HRM conducted in the health care context, the utilisation of the terminology of high involvement has been particularly pervasive among scholars (e.g. Avgar et al., 2011; Harmon, Scotti, Behson, Farias & Petzel, 2003; Rondeau & Wagar, 2006). As noted by Boxall and Macky (2009), managing professionals necessitates high levels of involvement as the ambiguous tasks they face requires pooling expert knowledge in order to make sound judgements and decisions at team meetings. An interesting line of research (e.g. Rondeau & Wagar, 2001; 2006) has focused on the use of high involvement principles in magnet status hospitals which are recognised hospitals of excellence in the US. Employees are believed to enjoy a positive and enriching work environment in these hospitals and such hospitals have been reported to have better patient outcomes, including fewer needle-stick injuries, lower mortality and higher patient satisfaction (Laschinger, Shamian & Thomson, 2001). Compared with other workplaces,

lower levels of turnover and higher job satisfaction are also reported in these hospitals (Kramer & Schmalenberg, 2003). In light of these positive outcomes, it is interesting to note that magnet status hospitals espouse values indicative of HIWPs and these hospitals are seen as an 'employer of choice' among health care professionals.

This line of research shows that HIWPs are valued by hospital employees because they promote humanistic values and it further demonstrates that the hospitals care for employees' well-being (e.g., Harmon et al., 2003; Rondeau & Wagar, 2001; 2006). HIWPs are believed to provide health care employees with the essential mix of autonomy and skill development which are highly valued resources (Rondeau & Wagar, 2006). Indeed, this hypothesised positive benefit of involvement, is one of the main reasons for the positive perspective adopted in this thesis regarding the effects of HIWPs. Given that the high involvement stream has already been integrated into the health care literature, a focus on this system of HR practices in order to advance our understanding of the relationship between HRM and employee well-being in health care is important. This focus on HIWPs compared to other HR systems recognises the persuasive line of research which argues for a consideration of the context of HRM system implementation in organisations (Boxall & Macky, 2009; Paauwe, 2004; Veld, Paauwe & Boselie, 2010). As argued by Harris et al. (2007), "the unique characteristics of health care organisations ensure that the most effective HRM systems will often be those which are tailored to specific health settings" (p.452). The measurement of HIWPs in this thesis is consistent with other scholars in the Canadian health care context (Chênevert, Jourdain & Tremblay, 2013; Pare & Tremblay, 2007; Tremblay, Cloutier, Simard, Chênevert & Vandenberghe, 2010; Tremblay, Guay, Simard & Chênevert, 2000) thus addressing this specification.

1.2.3 Theoretical Approaches: The Salience of COR Theory

In theorising about the relationship between perceptions of HIWPs and employee well-being outcomes, a number of models and theoretical perspectives are relevant. These include but are not limited to the Job Demands-Control (JD-C model) (Karasek, 1979), the Job Demands-Resources (JD-R model) (Demerouti, Bakker, Nachreiner & Schaufeli, 2001), the Ability-Motivation-Opportunity (AMO) model (Appelbaum, Bailey, Berg & Kalleberg, 2000), social exchange theory (Blau, 1964) and Conservation of Resources Theory (COR) (Hobfoll, 1989). The JD-C model is one of the most frequently adopted explanations for explaining how HIWPs can improve employee well-being (Castanheira & Chambel, 2010; Jensen, Patel & Messersmith, 2013; Mackie, Holohan & Gottlieb, 2001; Wood et al., 2012; Wood & de Menezes, 2011). This model demonstrates how HIWPs can offer a sense of control which enables employees to adjust to their job demands and consequently improve their well-being (e.g. Castanheira & Chambel, 2010). Similar to the JD-C model, the JD-R model considers HIWPs as potential resources capable of reducing the effects of stressors on strain (Bartram, Casimir, Djurkovic, Leggat & Stanton, 2012). In addition, it demonstres the direct effect of resouces such as HIWPs on employees' well-being outcomes. The HIWPs approach is also theoretically grounded in the AMO model (Appelbaum et al., 2000), whereby HR practices are posited to increase employees' abilities, motivation and opportunity to participate. Consistent with this model, Boxall and Macky (2009) suggest that it is the choice to improve employee involvement opportunities in the work process that leads on to the ability and motivation dimensions ('O' leads to 'A' and 'M'; Appelbaum et al., 2000, p.39-44). Therefore, for the high involvement model to work, it must positively affect employee abilities, motivations and opportunities to participate. Another frequently used approach to explain the relationship between perceptions of HIWPs and well-being (Baptiste, 2008; Gould-Williams, 2004), is the motivational process underpinning social exchange theory

(Blau, 1964). In this sense, HIWPs are perceived by employees as a sign of support from the organisation and, in turn, they feel obligated to reciprocate with positive attitudes and behaviours (Snape & Redman, 2010; Wu & Chaturvedi, 2009).

Although many of these approaches are insightful in explaining the relationship between HIWPs and well-being, many are limited with regard to providing researchers with a theoretical perspective that explains the psychological processes through which HIWPs exert their influence on employees' health related well-being outcomes. For example, although adding significant insights into how HIWPs improve well-being, the JD-C model necessarily implies that employee perceptions of job control (facilitated through the presence of HIWPs) moderate the relationship between job demands and burnout. However, the relationship between HIWPs and health related well-being outcomes is rarely tested in this way (see Jensen et al., 2013 for an exception). Similarly, although HIWPs could be considered as a key resource (e.g. Bartram et al., 2012), from a Job JD-R model perspective (Demerouti et al., 2001), this necessarily implies that demands and resources independently influence health impairment (i.e. exhaustion) and motivational outcomes (i.e. engagement) respectively. Moreover, testing the interaction effect of job demands and resources in terms of how they relate to positive and negative outcomes would be necessary in order to completely test the JD-R model. However, it is possible that resources (e.g. HIWPs) could be related to both demands and resources in different ways and simultaneously influence motivational and health impairment outcomes. Indeed, it would perhaps be plausible to suggest that HIWPs will act as an antecedent to the JD-R model. Another issue with the JD-R model is that because it is as a descriptive model, additional theoretical perspectives are often needed to explain the psychological processes that are involved given the specific demands, resources and outcomes that are included (Schaufeli & Taris, 2014). From a social exchange theory perspective, it is believed that the provision of HIWPs from the organisation is indicative of

its support for employees and employees are largely believed to reciprocate with positive attitudes and behaviours (e.g. Wu & Chaturvedi, 2009). However, very little emphasis is placed on how HIWPs could be related to lower demands and higher resources among employees, which in turn could improve their well-being. Therefore, COR theory is presented as a general framework and representative of a perhaps more parsimonious theory to examine (1) the relationship between perceptions of HIWPs and burnout, and (2) the underlying mechanisms that could explain this link.

COR theory is an integrated resource theory (Hobfoll, 1989), which builds on well-established stress and motivational theory to offer a dynamic framework to analyse not only the development of burnout but also its prevention. "COR theory posits that people seek to obtain, retain, and protect resources and that stress occurs when resources are threatened with loss or lost or when individuals fail to gain resources after substantive resource investment" (Hobfoll, 2002, p.312). In the work context, resources could be conceived of as many things, but are usually referred to as objects (e.g. money), conditions (e.g. supportive work environment), personal resources (e.g. control) and energy resources (e.g. time) that have intrinsic or instrumental value (Gorgievski & Hobfoll, 2008). COR theory has two fundamental principles to explain how and why individuals behave as a function of resources; the 'primacy of resource loss' principle and the 'resource investment' principle (Hobfoll, 2002). According to the former principle, resource loss is viewed as disproportionately more salient than resource gain which means that real or anticipated resource loss has stronger motivational power than expected resource gain. In this regard, because individuals are sensitive to resource loss, they overcompensate in the amount of resources expended to prevent further loss (Hobfoll & Freedy, 1993). Indeed, resource loss is viewed as leading to impaired psychological well-being and ultimately impaired mental health (Gorgievski &

Hobfoll, 2008). On the other hand, the 'resource investment' principle of COR theory posits that people must invest resources in order to protect against resource loss, recover from losses and gain resources. This perspective recognises that although resources are viewed by most workers as less salient than the prevention of loss, gains are not trivial (Hobfoll & Freedy, 1993). Resources may compensate for certain losses, but they may also help workers cope with resource loss. Indeed, a related corollary of the 'resource investment' principle is that those with greater resources are less vulnerable to resource loss and more capable of orchestrating resource gain (Gorgiewski & Hobfoll, 2008). Conversely, those with fewer resources are more vulnerable to resource loss and less capable of resource gain. Stemming from a COR theory perspective, a number of authors have recently considered HR practices as a critical resource from which employees can draw upon in their work environment (Bartram et al., 2012, Sun & Pan, 2008; Wheeler, Halbesleben & Harris, 2012). This is because, in many cases, HR practices have instrumental value for employees as they provide them with higher levels of empowerment, information sharing, and knowledge and skills to carry out their work while rewarding them for their efforts.

According to Sun and Pan (2008), HR practices enable employees to obtain sufficient resources to meet job demands and gain additional resources following personal investment (Sun & Pan, 2008). Specifically, their study highlighted how high commitment HR practices resulted in lower levels of emotional exhaustion among manufacturing workers in China. Their study was carried out at the individual level of analysis thus showing how individuals perceive HR practices as an important resource in the work context. Although their study focused on commitment based HR practices, it is important to note that participation in decision making and involvement is already regarded as a critical resource for employees in research studies (Bakker & Demerouti, 2007; Bakker, Demerouti, de Boer & Schaufeli, 2003; Maslach et al., 1986; Wheeler et al., 2013).

In order to consider HR practices as a resource at the macro level, Wheeler and colleagues (2012) integrate Barney's (1991) macro-level resource-based view (RBV) of the firm with Hobfoll's (1989) micro-level COR theory. According to the RBV of the firm, resources consist of tangible and intangible assets, practices, and processes that enable the company to meet strategic aims and have desirable effects on employee outcomes (Barney, 2001). This perspective recognises the multilevel configuration of resources which have the ability to impact unit and employee outcomes. Nevertheless, the micro-level COR theory proposes that due to the fact that employees seek to avoid resource depletion, employees seek sources of support in order to mitigate stress (Hobfoll, 2001). Employees may draw upon people, groups, or organisations in their work environment to restock expended resources or hoard excess resources for future use (Hobfoll, 2001). Overall, this thesis posits that employee perceptions of the hospital's HIWPs represents an important source of support for them which they can draw upon in order to bolster additional resources and ameliorate demands (e.g. Bartram et al., 2012), which will eventually result in lower levels of burnout. According to COR theory, resources such as HR practices are indeed important because they contribute to the achievement of positive personal outcomes such as better coping, adaptation and well-being (Hobfoll, 2002).

1.2.4 Employee Well-Being Under High Involvement Work Practices

In the HRM literature, there is an on-going debate regarding the impact of HIWPs on workers (e.g. Legge, 1995; Wood et al., 2012; Wood & de Menezes, 2011). As previously mentioned, the optimistic or 'mainstream' perspective advocates the benefits of HIWPs for firms and workers. Conversely, the pessimistic or so called 'exploitation hypothesis', would suggest that while the organisation benefits, little effects spill over to employees. Instead, employees may feel exploited by the organisational quest for improved organisational performance. This

assumption is consistent with labour process theory (Braverman, 1974), whereby management effort to manage employees intensifies work for those involved thus negatively influencing well-being (Wood et al., 2012). The traditional focus on examining the relationship between HRM and performance is viewed by scholars as short-sighted because it tends to neglect the human factor which is an essential part of what HRM is all about (e.g. Legge, 1995; Paauwe, 2009; Peccei, 2004). Negative implications for employees' health arising from HIWPs have been found in a number of studies (e.g. Godard, 2001; Kroon et al. 2009; Ramsay et al., 2000). Indeed, using the UK's Workplace Employment Relations Survey (WERS) 2004, Wood et al. (2012) found that HIWPs resulted in increased stress and lower satisfaction for employees. Interestingly, the negative effect of HIWPs on job satisfaction detracted the positive association between HIWPs and economic performance measures, thus supporting the so called 'counteracting effects' model. This 'counteracting effects' model suggests that HIWPs have a positive impact on organisational performance but because they do not have positive consequences for employees' well-being (i.e. increased stress), the HIWPs-performance relationship essentially disappears. Godard (2001) found, based on a telephone survey conducted in 1997 among 508 employed Canadians, that high performance work practices (HPWP) increased stress. Kroon et al. (2009) found among 86 Dutch organisations that manager rated HPWP increased employees' job demands (psychosocial job conditions) which in turn were associated with higher levels of burnout (emotional exhaustion). In other words, HPWP increased employee burnout by increasing the amount and speed of their work. Vanhala and Tuomi (2006) argued that the link from HRM to employee burnout is too distal as they found that most HR practices were either weakly or uncorrelated with emotional exhaustion. Nevertheless, a large number of authors have found empirical support for the positive health effects of HR practices (e.g. Butts et al., 2009; Castanheira & Chambel, 2010; Mackie et al., 2001). For example, Butts et al. (2009) revealed

that HIWPs were associated with higher levels of job satisfaction and commitment and lower levels of stress and intentions to quit. Psychological empowerment was found to mediate these relationships. Sun and Pan (2008) found among construction workers in China that high commitment HR practices were associated with lower levels of emotional exhaustion. Moreover, Castanheira and Chambel (2010) showed that HIWPs were associated with lower levels of burnout (emotional exhaustion and depersonalisation) among a sample of call center workers. They found that this relationship was explained through increased autonomy and lower job demands (emotional dissonance and psychosocial job conditions). In other words, autonomy and job demands mediated the relationship between HIWPs and burnout. Despite the few studies examining the impact of HIWPs on well-being, the majority of studies have focused on positive well-being outcomes such as job satisfaction and organisational commitment. However, a recent meta-analytic review of the HR-well-being-performance relationship has concluded that only six studies have focused on negative health well-being outcomes such as burnout (Van de Voorde, Paauwe & van Veldhoven, 2012). In the same regard, it is evident from the literature that fewer studies have focused on the effects of HIWPs on burnout (e.g. Castanheira & Chambel, 2010) and particularly in the health care context (e.g. Bartram et al., 2012; Harris et al., 2007). Therefore, more evidence is needed regarding the effects of HIWPs on health related well-being outcomes in the health care context. Indeed, most studies focusing on the impact of HIWPs on employee outcomes have ignored the service sector such as health care, thus, there remains a general debate about the impact of HIWPs on workers in this context (Harley et al., 20007; Harris et al., 2007; Preuss, 2003). This thesis will shed further light on this issue by focusing on the health outcome of burnout.

Burnout is a health related well-being outcome which is particularly relevant to the context under investigation. Indeed, burnout is regarded as an occupational disease among

health care professionals (Felton, 1998). This is due to the fact that they "undergo repetitive and continuing exposure to the ill, the dying, and death" (Felton, 1998, p.241). Health care professionals also work long hours, often have difficult working conditions and spend a lot of their time dealing with difficult patients (Mosadeghrad, Ferlie & Rosenberg, 2011). Despite the wide range of antecedents to burnout, treating and/or preventing its occurrence is an important endeavour (Le Blanc et al., 2007; Shirom, 2010). Indeed, burnout has been shown to be directly linked to the quality of care across a wide range of countries (e.g. Poghosyan, Clarke, Finlayson & Aiken, 2010). It should be noted that the few studies which have investigated the effects of HIWPs on burnout, have yielded contradictory results (Vanhala & Tuomi, 2006; Kroon et al., 2009; Castanheira & Chambel, 2010). Therefore, we cannot be sure whether studies that found either positive or negative effects of HR on burnout can generalise to the health care context.

1.3 Research Questions

Building on the predictions of COR theory, the primary objective of this research is to propose and test three models which investigate the relationship between perceptions of HIWPs and burnout among health care employees and its underlying mechanisms. Specifically this research addresses the following research questions:

Question 1: *What effect (positive or negative) do employees' perceptions of HIWPs have on self-reported burnout in the health care context?*

Most of the interventions that have been used to reduce burnout are individual-oriented ones aimed at providing treatment, not prevention, which is consistent with most other stress interventions (Nelson, Quick & Simmons, 2001). However, a number of researchers have highlighted that organisation based interventions such as the adoption of HR practices could

be an important factor in burnout reduction (e.g. Halbesleben & Buckley, 2004; Shirom, 2010). Previous research has highlighted that participation in decision making (Bakker & Demerouti, 2007) and a sense of control over their environmental (Fisher, 1984), are an important resource for employees. Those employees with a high sense of control tend to use their resources prudently, relying on themselves when appropriate, and using available social support when this is the more effective coping route (Hobfoll & Shirom, 2000). One of the central features of HIWPs is the provision of empowerment and control for employees (Butts et al., 2009; Castanheira & Chambel, 2010). Such empowerment allows for employees to respond to job demands according their needs and circumstances, which is particularly important in reducing stress (Butts et al., 2009). This empowerment or control is also important for employees' well-being because it provides them with more opportunities to cope with stressful situations (Bakker & Demerouti, 2007; Bartram et al., 2012). HIWPs are believed to develop broader horizons among employees, so that they can think of better ways of doing their jobs, connect what they do with others and react more effectively to novel problems (Wood et al., 2012). Indeed, they work smarter because they are encouraged to develop their skills and competence (Edwards & Wright, 2001). Information sharing together with training are also believed to improve employees' capacity to deal with tasks because they provide the time and opportunity to discuss difficulties and share solutions (Castanheira & Chambel, 2010). Indeed, those who received training may be better equipped to deal with their job demands (e.g. difficult patients) and in this regard have a wide range of coping mechanisms (Bartram et al., 2012). As having control and perceiving involvement related HR practices represents an instrumental and valued resource for employees, this thesis argues that perceptions regarding the provision of HIWPs might alleviate burnout. While a number of theoretical perspectives bear relevance, given the prevalence of COR theory in the

occupational health psychology literature in explaining burnout (e.g. Halbesleben & Buckley, 2004), COR theory is adopted to explain how perceptions of HIWPs might alleviate burnout.

It is important to highlight that in the broader HRM literature, previous studies have found mixed results regarding the impact of various sets of HR practices on employee burnout (e.g. Castanheira & Chambel, 2010; Kroon et al., 2009; Sun & Pan, 2008). Kroon et al. (2009) conducted a study involving a wide range of organisations[1] and found that a set of HPWP increased employees' levels of emotional exhaustion. Also, Vanhala and Tumoi (2006) found that the majority of HR practices were either weakly or uncorrelated with the emotional exhaustion component of burnout. However, Sun and Pan (2008) found, in a manufacturing context in China, that HR practices were associated with lower levels of emotional exhaustion. More recently, Castanheira and Chambel (2010) found, in a call centre context, that HIWPs reduced the two core symptoms of burnout (emotional exhaustion and depersonalisation). Based on the competing results, further research to clarify the precise direction of this relationship is warranted in the wider HRM literature and the health care sector in particular for a number of reasons. First, the aforementioned studies have not specifically conducted their investigation in the health care context, thus the extent to which they are generalisable is still not known. It is believed that the health care sector represents an important context to investigate this relationship further as it is widely assumed that the quality of patient care delivered is dependent on the quality of the working life experienced by employees (Buttigieg, West & Dawson, 2011; West, 2001). Second, burnout is particularly acute among health care employees (e.g. Aiken et al., 2002; Maslach et al., 2001), thus, examining ways to alleviate it represents a worthwhile cause for both research and practice (Le Blanc et al., 2007). Indeed, burnout has been directly related to the quality of

[1] In the study by Kroon et al. (2009), 45 percent of the organisations were in the service industry (e.g. finance and retail), about 11 percent of the organisations were in health care (e.g. hospitals), 25 percent of the organisations were in industry, and 16 percent were in non-commercial organisations (e.g. schools).

patient care across a wide range of countries (Poghosyan et al., 2010) and therefore it is not only a well-being outcome but also represents an important performance outcome for health care organisations (e.g. Felton, 1998). Third, in the existing studies, which have investigated the relationship between HR practices and well-being outcomes, the focus on health related well-being outcomes such as burnout is rather limited (Van de Voorde et al., 2012). Therefore, identifying the precise direction of the relationship between perceptions of HIWPs and health well-being outcomes such as burnout is important. The results will advance knowledge on whether there is support for a 'mainstream' (optimistic) or 'critical' (pessimistic) perspective in the health care context. Finally, this thesis goes beyond previous studies (Kroon et al., 2009; Sun & Pan, 2008; Vanhala & Tuomi, 2006) which only consider the emotional exhaustion component of burnout when investigating its relationship with HR practices. The two core symptoms of burnout (emotional exhaustion and depersonalisation) are necessary to study, especially in the health care context. Although emotional exhaustion reflects the stress dimension of burnout, it fails to capture the critical aspects of the relationship people have with their work (Halbesleben & Buckley, 2004). This is particularly important in the health care context, as the relationship between employees and people (i.e. patients in this study) is the central tenet of effective health care delivery. Indeed, this dysfunctional attitude is believed to prevent employees from adequately performing their job which can compromise the quality of patient care (Le Blanc et al., 2007). Therefore, alleviating depersonalisation towards patients is a primary goal of health care managers (Felton, 1998). Although burnout has traditionally been composed of emotional exhaustion, depersonalisation and reduced personal accomplishment, this thesis considers the emotional exhaustion and depersonalisation dimensions only given that they are considered to be the two core dimensions (e.g. Shirom, 2010). Personal accomplishment is believed to be

independent of the core dimensions and has been considered more of a personality characteristic similar to the notion of self-efficacy (Cordes & Dougherty, 1993).

In summary, the overall research question seeks to determine the effects of employees' perceptions of HIWPs on burnout using three different research studies.

Question 2: *What are the underlying mechanisms for the proposed link between employees' perceptions of HIWPs and self-reported burnout in the health care context?*

Although a number of propositions have been put forward to explain how HIWPs influence employee well-being outcomes, this link remains under-theorised (Peccei et al., 2013; Wood & de Menezes, 2011; Wood et al., 2012). Wood and de Menezes (2011) note that the JD-C model put forth by Karasek (1979) is among the most frequently adopted theoretical positions. According to this model, HIWPs are aimed at providing greater control and discretion for employees, which can reduce strain (e.g. Macky & Boxall, 2008; Mackie et al., 2001). However, as indicated above, many theories that have been used to explain the link between HIWPs and well-being outcomes, do not allow for a systematic understanding of the psychological processes through which perceived HIWPs exert their influence. Therefore, questions remain over other suitable theoretical approaches that could capture the simultaneous role of HIWPs as organisational resources to reduce demands and increase other resources, in order to influence burnout. The present thesis considers COR theory (Hobfoll, 1989) as a plausible theoretical approach capable of explaining such relationships. Through its adoption, the aim is to answer the various calls to engage in further theorising to better explain the HIWPs-well-being relationship (e.g. Peccei et al., 2013; Wood et al., 2012). Consistent with the JD-C model, Castanheira and Chambel (2010) found that HIWPs are negatively related to burnout and that this relationship is partially mediated through lower job demands (psychosocial job conditions) and higher autonomy. Given that the mediation was

partial, the authors called for future studies to analyse a broader range of job demands and job resources such as performance feedback, skills variety and role conflict and role ambiguity, given their expected relationship with worker burnout. The need for further theoretical exploration of how HRM translates into job demands and resources has also been echoed by Peccei et al. (2013). Based on the calls from scholars to understand if and how demands and resources can explain the link between HR and well-being (Castanheira & Chambel, 2010; Kroon et al., 2009; Peccei et al., 2013), this thesis identifies and tests context specific job demands and resources likely to explain this relationship. Also, consistent with the aforementioned calls from authors to consider different theoretical approaches in order to explain the HRM-well-being link (Peccei et al., 2013), this thesis utilises COR theory (Hobfoll, 1989) to explain the proposed linkages between perceptions of HIWPs, job demands and resources, and the well-being outcome of burnout.

According to COR theory, if there is an actual resource loss, or a perceived threat of resource loss in the workplace environment, employees will have inadequate resources to meet their work demands, or they will not obtain anticipated returns on an investment of resources (Hobfoll, 2002). In any case, employees will experience burnout in such conditions (Hobfoll, 1989). Sun and Pan (2008) argue that it is the organisation's obligation to give employees adequate social support and job enhancement opportunities to cope with work pressure, role conflict, and heavy workload; and ensure that resource acquisition is not threatened. HIWPs should enable employees to obtain sufficient resources to meet their job demands and assist them in gaining additional positive resources (Bartram et al., 2012; Sun & Pan, 2008). In contrast, low involvement HR practices are likely to threaten or deplete employees' resources. Although a small number of studies have proposed that HR practices are related to worker burnout (e.g. Castanheira & Chambel, 2010; Sun & Pan, 2008), most studies have failed to examine how or why these relationships occur (Castanheira &

Chambel, 2010). As noted by Richard and Thompson (1999), "how something is done is often more important than what is done" (p.31), but the empirical studies focus on the latter in the realm of HRM research. This thesis, therefore, proposes and empirically investigates the salience of job demands and job resources in the HIWPs and well-being link from a COR theory perspective. In Study 1 of the present thesis, the author identified role conflict, role overload and role ambiguity as important job demands that might mediate the relationship between HIWPs and burnout among health care employees. Investigating job demands as potential mediators addresses calls for their inclusion by a number of authors to explain the HIWPs and broader well-being link (e.g. Castanheira & Chambel, 2010; Wood et al., 2012). In Study 2, the resource of person-organisation fit (P-O fit) is identified and tested as another possible explanation for explaining the HIWPs-burnout relationship. In doing so, the study brings together various aspects of HR and occupational health psychology theory to explain how HIWPs influence burnout. By investigating these relationships, the recent theoretical propositions of Wheeler et al. (2013) are empirically tested. Wheeler and colleagues were the first authors to consider P-O fit as a resource which can be influenced by antecedent resources (e.g. HR practices) and effect employee outcomes (e.g. burnout). It also responds to calls from authors (e.g. Boon, Den Hartog, Boselie & Paauwe, 2011) to further investigate the role of HR practices that go beyond selection in terms of their potential in increasing P-O fit. As Study 2 in this thesis utilises a time lagged research design, it addresses concerns from authors who note that processes governed by COR theory have a time dependent element and that the effect of resources on outcomes might take some time to develop (e.g. Halbesleben, Neveu, Paustian-Underdahl & Westman, 2014). Finally, Study 3 investigates the impact of perceptions of HIWPs on burnout via the simultaneous mediating role of procedural justice and role overload. Although research has focused on the mediating role of procedural justice in the relationship between HIWPs and employee attitudes and behaviours (Pare & Tremblay,

2007; Kuvaas, 2008; Wu & Chaturvedi, 2009), no study to date has tested its mediating effect with respect to burnout in the health care context. Testing the impact of HIWPs via procedural justice and role overload allows for determination of whether support is found for a 'mainstream' perspective or the 'exploitation hypothesis' by considering both a demand and a resource (Kroon et al., 2009). Indeed, Kroon and colleagues have previously tested the impact of HPWP on burnout via a job demand (psychosocial job conditions) and resource (procedural justice). However, Study 3 in the present thesis attempts to build on this study and add unique insights in a number of ways. The present study considers the job demand of role overload instead of psychosocial job conditions, which is arguably the most common job demand faced by nurses, which is the sample for this study (Felton, 1998; Le Blanc, Hox, Peeters & Taris, 2007). Indeed, based on a review of 36 studies, workload emerged as one of the main correlates of burnout among nursing staff (Duquette, Kerouac, Sandhu & Beaudet, 1994). It also consider managers as the target of procedural justice, rather than the organisation, thus taking on board the advice from authors that justice is more likely to be perceived by one's supervisor and manager when considering the impact of HR practices (Kroon et al., 2009; Wu & Chaturvedi, 2009). This study also measures perceptions of HR practices from the perspective of employees rather than HR managers as this is believed garner a more reliable estimate (Guest, 2011; Kehoe & Wright, 2010). Further, it seeks to examine the mediators of procedural justice and role overload and their impact on burnout in greater detail by considering whether they are influenced by the social context of work.

Indeed, in addition to the broader objectives of Study 3, which aims to test the mediating role of role overload and procedural justice in the HIWPs - burnout relationship among a sample of nurses, it also investigates the moderating role of colleague support in the procedural justice and role overload-burnout relationship. Indeed, it is plausible to suggest that the outcomes of HIWPs (procedural justice and role overload) can also be influenced by

the broader social context of work. Specifically, the study aims to fulfil the call for research by Butts et al. (2009) to further investigate the role of colleague support within the context of HIWPs and their effects on stress related outcomes. Social support is an interpersonal transaction that involves emotional concern, instrumental aid, information, or appraisal (House, 1981). Social support can be provided by a number of targets in health care such as supervisors, colleagues and doctors to name but a few. Leiter (1991a) regards the quality of the relationship among workers as a critical factor in burnout. When social support from colleagues is absent, this is viewed as a major stressor for employees (e.g. Schaufeli, 1999). Gittell, Seidner and Wimbush (2010) emphasise the interdependent nature of health care employees' work, which requires high levels of task integration and coordination. This would also imply the provision of higher levels of support to one another. Other recent research highlights that nurses demonstrate many forms of discretionary and supportive behaviour towards one another in order to deal with burnout (Gilbert, Laschinger & Leiter, 2010). Indeed, because nurses work in close proximity to their colleagues, they often seek support from such colleagues before confronting any other source of support (Spooner-Lane, 2004). Therefore, a focus on colleague support is regarded as a particularly instrumental source of support in the present study, which focused on a sample of nurses.

Colleague support is largely viewed to be beneficial for employees and functions to create a more positive work environment (Carlson & Perrewe, 1999). However, the role of social support and its effects on stress related outcomes is unclear (Fenlason & Beehr, 1994; Ganster, Fusilier & Mayes, 1986; Halbesleben, 2006). While some authors have found support for the buffering effect of colleague support (e.g. Bakker, Demerouti & Euwema, 2005), others have found no buffering effect (e.g. Ganster et al., 1986) and others have found, in fact, a reverse buffering effect (e.g. Fernandez, 1995). Fernandez (1995) posited that this reverse buffering effect is likely to have occurred because support (for example talking with

coworkers) can often legitimise negative feelings about the workplace or its demands. Indeed, Fenlason and Beehr (1994) argued that negative conversations with co-workers that would otherwise seem like emotional support, may be associated with higher strain. At the same time, other studies have found that colleague support is an important factor in buffering the effect of job demands on burnout (Cohen & Willis, 1985; Halbesleben, 2006). COR theory is perhaps the most relevant theory for explaining how this occurs given that instrumental resources such as social support can ensure that employees' energetic resources are not depleted (Hobfoll, 1989). Consistent with the 'primacy of resource loss' principle in COR, those who lack a strong resource pool, including a lack of social support, are likely to burn out more quickly and experience more cycles of resource loss when they feel stress (Halbesleben, 2006). Hobfoll (1989) argued that social support can broaden one's pool of available resources and can replace or reinforce other resources that have been lacking. Social support from colleagues can help reinforce the positive aspects of the self which stressful times might have led one to lose sight of (e.g. Hobfoll, 1989). It also provides employees' with more coping options by potentially providing a solution to the problem or reducing the importance of the problem, thereby helping employees to avoid burnout (Cohen & Willis, 1985; Halbesleben, 2006). Therefore, it is expected that colleague support will buffer or reduce the positive association between role overload and burnout. Similarly, as individuals have a tendency to seek and obtain resources and invest surplus resources into their work environment (consistent with the 'Resource Investment' principle and 'Resource Caravan' concept in COR theory) (Hobfoll, 2011), it is believed that colleague support will have an amplifying positive effect and thus strengthen the negative relationship between procedural justice and burnout. Indeed, rather than relying purely on procedural justice, colleagues may be the more proximal target for nurses and may be closer to the source of stress. Therefore, this form of support represents yet another resource pool which is available and can be used

by employees to cope with burnout. COR theory posits that resources tend to co-travel in caravans, thus demonstrating how resource gain in one domain, produces gains in others and likewise for their loss (Hobfoll, 2002). Also, consistent with the notion of a resource 'gain spiral' (Hobfoll, 2011), "employees who gain resources increase their resource pool and acquire additional resources (Peccei et al., 2013, p. 43). It has been noted that the moderating role of social support can depend on the context in which it is investigated and detecting such interaction effects requires a large sample size (Ganster et al., 1986). This thesis considers the potential moderating role of colleague support among nurses and uses a large sample size (N= 2,174). Overall, it is believed that testing the moderating role of colleague support is important because the majority of nursing studies have failed to examine how support from within the work environment mitigates burnout (Spooner-Lane, 2004; Jenkins & Elliot, 2004).

1.4 Methodology

1.4.1 Research Development and Design

1.4.1.1 Theory Development. A research problem which is both unsolved and of interest requires theory which explains it (Pillutla & Thau, 2013). The research problem of interest in this study is that inconsistent findings have been reported regarding the impact of HIWPs on employee well-being outcomes in general and burnout in particular. Indeed, there is still no consensus in the existing HRM literature as to whether HR practices in a general sense have positive or negative effects on employee well-being outcomes and this is particularly the case when considering negative health related well-being outcomes like burnout (Van de Voorde et al., 2012). Moreover, another research problem which has been highlighted concerns how HIWPs impacts well-being outcomes (e.g. Wood et al., 2012). Indeed, the causal mechanisms linking HIWPs to employee outcomes remain unclear (Edwards & Wright, 2001). A few

studies have investigated the HIWPs – burnout relationship (Castanhiera & Chambel, 2010; Kroon et al., 2009; Sun & Pan, 2008; Vanhala & Tuomi, 2006), but most have failed to examine the mediators in this relationship. In response, the three papers in this thesis adopt COR theory (Hobfoll, 1989) from the occupational health psychology literature in order to empirically investigate whether job demands and resources act as potential mediators in this relationship. According to Ferris, Hochwarter and Buckley (2011), theory testing and examining contradictory results in different contexts is important for scientific advancement. In applying COR theory, the argument posed is that HIWPs are an important resource for health care employees which will have an instrumental role in alleviating burnout. This proposition is based on the 'primacy of resource loss' and 'resource investment' principle embedded within COR theory (Hobfoll, 2002), which stipulates that valued and instrumental resources (i.e. HIWPs) have a protective role against impaired well-being. Although a positive perspective regarding the effects of HIWPs is adopted, COR theory could also be relevant from the critical perspective of HRM, which argues that HIWPs could intensify employees' job demands and negatively influence their well-being (Wood et al., 2012). As noted, consistent with labour process theory, many authors have found negative consequences for employees who perceived high levels of HPWP (e.g. Kroon et al., 2009; Ramsay et al., 2000). This notion that resources such as HR practices can potentially increase burnout is not ignored in COR theory (Hobfoll, 2002; Wheeler et al., 2013). For example, Schaufeli and Taris (2014) observe that resources i.e. HR practices, could be seen as a demand rather than a resource. In this regard, some resources are negatively appraised and therefore are seen as a threat to, rather than a gain of resources. Hobfoll (2001) argued that managing resources often require resources in themselves thus showing how this process can lead to stress. Edwards (2008) also notes that excess resources have the potential to elevate stress. The rationale for this argument is that the psychological process of managing

resources can, in and of itself, create a demand and it is a prerequisite for excess resources to match the environment. If HIWPs were associated with lower job demands and lower burnout, this would lend credence to the 'mainstream' or optimistic perspective of HRM. If HIWPs were associated with higher levels of perceived job demands and in turn burnout, this would be consistent with the labour process theory perspective (Braverman, 1974), often referred to as the pessimistic approach or 'exploitation hypothesis' (Kroon et al., 2009). By investigating the impact of HIWPs on burnout and the underlying linking mechanisms, this thesis contributes to understanding the wider 'black box' problem in terms of how perceptions of HIWPs influence burnout (Castanheira & Chambel, 2010). In doing so, it addresses calls from researchers to explore the salience of other strong theoretical approaches capable of explaining the relationship between HIWPs and employee well-being outcomes (Paauwe, 2009; Peccei et al., 2013). COR theory is regarded as one of the leading theories in understanding how resources, i.e. HR practices, lead to burnout (Halbesleben & Buckley, 2004) and therefore its adoption in the HR domain was seen as important and timely.

1.4.1.2 Theory Testing. The panacea for developing new theory can often result in the neglect of activities necessary for scientific advancement including theory testing and empirical replications of proposed relationships in different contexts (Ferris et al., 2011). This is unfortunate because theory testing is necessary to assess whether previous results are context specific, or if they transcend certain contexts (Eden, 2004). Testing a theory or model across a variety of contexts can therefore contribute to theory confirmation, extension and/or development of a new theory (Aguinis, Pierce, Bosco, Dalton & Dalton, 2011). The three studies in this thesis propose and empirically test the impact of employees' perceptions of HIWPs and burnout in the health care context. Although the impact of HIWPs on burnout has been explored and some authors have sought to examine the causal mechanisms underpinning

this relationship (Castanheira & Chambel, 2010), a focus on this investigation in the health care context has been sparse (Baptiste, 2008; Bartram et al., 2012; Harris et al., 2007). Indeed, evidence regarding the effectiveness of HR practices in the health care sector is still not known (Buchan, 2004; Harley et al., 2007; Harris et al., 2007; Leggat, Bartram & Stanton, 2011). Therefore, investigating the HIWPs – burnout relationship in three separate studies in the health care context represents a significant contribution to the field.

The first study in this thesis examined the influence of HIWPs on burnout in a large Canadian hospital. The second study investigated this relationship using a time lagged research design. This is likely to provide further insights because it will determine whether employees' perceptions of HIWPs can influence burnout over a long term period (3 years later). From another perspective, burnout is in fact an outcome which is believed to develop overtime (Maslach et al., 2001) and it may take time for resources to have their intended effects (Halbesleben et al., 2014). The third study investigated the mediating role of procedural justice and role overload in the HIWPs - burnout relationship. This is critical as it will be possible to identify whether demands and resources can simultaneously explain this relationship. The model is tested among a homogenous sample nurses, who are believed to score among the highest of all health care professionals in terms of burnout (e.g. Felton, 1998). Moreover, testing the moderating role of colleague support in the outcomes arising from HIWPs (procedural justice and role overload) has rarely been conducted among nurses (which was tested in the third study of this thesis). Therefore, in this context, this thesis sheds light and clarifies in greater detail the extent to which resources can complement each other to bring about even lower levels of burnout and whether the buffering hypothesis works as hypothesised in this context.

Indeed, the buffering hypothesis has received mixed support in the literature on social support (Halbesleben, 2006; Jenkins & Elliot, 2004), and deserves further research attention

among nurses (Elliot & Jenkins, 2004; Spooner-Lane, 2004). At the same time, no studies have yet considered the extent to which colleague support interacts with procedural justice to produce stronger effects in ameliorating burnout. Therefore, as a whole, the thesis also contributes to the wider calls from authors to engage in further theory testing regarding the potential moderating effect of social support (e.g. Halbesleben, 2006; Jenkins & Elliot, 2004; Sochos, Bowers & Kinman, 2012). More specifically, this thesis tests the moderating role of colleague support within the context of an overall model which examines the impact of HIWPs on burnout via procedural justice and role overload. In doing so, it responds to recent calls from Butts et al. (2009) to further investigate the role of work related sources of support (i.e. colleague support) within the context of participatory work systems and their effects on stress related outcomes.

1.4.1.3 Theory Expansion. The added value of the present thesis to the existing HRM literature is to introduce an important and established psychological resource theory from the field of occupational health psychology to the field of HRM. In doing so, it will use this theory to propose and test the underlying mechanisms through which HIWPs impact burnout among health care employees. Indeed, no studies to date have considered the role of COR theory in explaining the relationship between employees' perceptions of HIWPs, job demands, resources and burnout in the same explanatory model. In Study 1, the proposition is put forth that COR theory explains how perceptions of HIWPs relate to job demands (role conflict, role overload and role ambiguity) and, in turn, to burnout. This proposition and empirical test addresses a concern voiced by Peccei et al. (2013) that the processes in terms of how HRM translates into job demands is still not known. Consistent with the 'primacy of resource loss' principle, experiencing high levels of role conflict, role overload and role ambiguity are seen as a threat to employees resources and this in turn results in higher levels

of burnout (e.g. Lee & Ashforth, 1996). However, the 'resource investment' principle argues that people invest resources to protect against resource loss, recover from losses and gain additional resources (Hobfoll, 2002). A related corollary of this principle is that those with greater resources are less vulnerable to resource loss and more capable of orchestrating resource gain (Hobfoll, 2002). Therefore, this thesis, from a COR theory perspective, highlights the importance of resources (HIWPs) in enabling employees to cope with their job demands and, in turn, the resource loss associated with burnout (Bartram et al., 2012; Sun & Pan, 2008). Study 2 expands theory in the domain of HRM by bridging aspects of HRM theory, P-O fit theory and COR theory together into one single explanatory model. Only recently, COR theory has been proposed as a middle range theory to help understand the construct of P-O fit (Wheeler et al., 2013). As previously mentioned, resources generally consist of those objects, conditions, personal characteristics or energies that are valued by the individual (Hobfoll, 1989). Wheeler and colleagues acknowledge that while COR theory is not a P-O fit theory per se, P-O fit could be viewed as an assessment of whether or not an individual has the personally valued resources which could be indicative of poor P-O fit. Therefore, if the employing organisation provides resources (i.e. HIWPs) which are valued by the individual, this is indicative of P-O fit. The 'primacy of loss principle' explains how this occurs as individuals could face stress when they face the potential or actual loss of resources indicative of P-O fit. Also, from the aforementioned 'resource investment' principle and the passageway concept (Hobfoll, 2011), high levels of resources create resource caravans which lead to increased perceptions of P-O fit and creates a resource 'gain spiral' of P-O fit (Wheeler et al., 2013). According to Wheeler et al. (2013), the organisation-based support resource of HRM develops the organisation-bound resource of P-O fit. Indeed, as argued by Hobfoll (2011), organisational practices are all aspects of a resource-caravan creating and sustaining organisational ecologies. These ecologies can be seen as creating

passageways in which resources are supplied, protected, shared, fostered and pooled (Hobfoll, 2011). This was the theoretical rationale for proposing a model linking perceptions of HIWPs, P-O fit and burnout. However, it is important to note that Wheeler et al. (2013) noted that COR is a middle range theory in understanding P-O fit, which does not negate the inclusion of additional theoretical perspectives. Therefore, this thesis also relied on the Attraction-Selection-Attrition (ASA) framework (Schneider, 1987) to explain the relationship between HIWPs and P-O fit and on Malach and Leiter's (1997) model of burnout to explain the relationship between P-O fit and burnout. While Boon et al. (2011) previously investigated the role of HR practices in increasing P-O fit, they called for future research to consider a wider range of HR practices and their potential role in enhancing P-O fit. The ASA framework (Schneider, 1987) suggests that organisations attract, select and retain those employees who share similar characteristics to them. Most studies in HR have used this framework to highlight that prominent role that selection practices in particular have in increasing P-O fit (Boon et al., 2011). However, it is recognised that selection is only one part of the story and researchers should give greater attention to understanding the factors that drive attraction in organisations (Ehrhart & Ziegert, 2005). Based on this, the present thesis focused on a range of HIWPs (empowerment, information sharing, non-monetary recognition and training and development) and their relationship to P-O fit and burnout. HIWPs were highlighted as an important resource for health care employees based on the fact that hospitals which are believed to be 'employers of choice' (also referred to as magnet hospitals) place high importance on HIWPs which are seen as a major attraction device (Rondeau & Wagar, 2006). Finally, Study 3 expands theory in HRM by investigating the simultaneous role of procedural justice and role overload in the relationship between perceptions of HIWPs and burnout. In doing so, it adopts a positive perspective and considers HIWPs as organisational resources which reduce demands (role overload) and foster

additional resources (procedural justice) in order to alleviate burnout. In essence, it demonstrates the parsimony and utility of COR in explaining how both job demands and resources can be included to mediate the HIWPs-burnout link. It also investigates the role of the wider social context of work (i.e. colleague support), which impinges on the outcomes arising from HIWPs (i.e. procedural justice and role overload). This will be beneficial for theory and practice as it will enable the determination of the conditions under which the outcomes of HIWPs will or will not produce its intended effects (Butts et al., 2009).

1.4.2 Research Context

The overall research for this thesis took place in the Canadian health care context. The Canadian health care sector is public with a long standing history of restructuring. Studies 1 and 2 were conducted in a West Island Health and Social Services Centre (HSSC) hospital in Canada. The West Island HSSC is a member of the Montreal Network of Health Promoting Hospitals and CSSSs, which is affiliated with the World Health Organisation (WHO). With the agreement of the HR director, questionnaires were sent to employees' private addresses in hard copy format in 2008. From 1802 hospital employees contacted for participation, 545 completed the questionnaire. This represents a response rate of 30%. Study 1 of this thesis included the entire sample of respondents (n = 545) who completed the questionnaire and the research design employed was cross-sectional in nature. No significant difference in terms of demographics was found between this final sample of respondents (N = 545) and the hospital's general population of employees (N = 1802). In this sample, 87.2% were women, average age was 44.72 years (SD = 10.21) and average tenure was 8.32 years (SD = 8.1). In terms of education, 16.7% of respondents held a secondary or vocational school diploma, 29.2% college diploma, 10.6% university degree, 32.9% bachelor, and 10.2% master's degree. 38 percent of employees were nursing and cardiorespiratory staff (e.g. auxiliary

nurse, nurse, respiratory therapist). 10.9 percent of employees were paratechnical staff, auxiliary service and trade personnel (e.g. nurse's aid, kitchen staff, housekeeping, laundry, plumbing, maintenance, carpenter). 17.6 percent of employees were office personnel (e.g. secretary, archivist, office clerk, administration technician). 7.7 percent of employees were health and social services technicians (e.g. radiology technicians, laboratory technician). 16.8 percent of employees were health and social services professionals (e.g. psychologist, educator, social worker, dietician, physiotherapist). 8.9 percent of employees were supervisory staff (e.g. senior, senior managers, middle management).

The survey administered to the employees in 2008 asked respondents whether they would be willing to participate in a follow up survey so that their responses could be matched. In 2011, from an overall population of 1,843 employees, 507 filled out the second survey questionnaire and returned it to the researchers. 185 respondents completed surveys at both time 1 and time 2. It was therefore possible to employ a time lagged research design. Those 185 employees who completed the questionnaire at both time 1 and time 2, represented the sample for Study 2 in this thesis. These respondents represented 10.15% of the overall population of employees. In this sample, 91.0% were women, average age was 48.80 years, and average tenure was 14.99 years. Seventy-one percent of respondents were members of the nursing or paramedical staff, and 72.7% were employed full-time. In terms of education, 87% of respondents held a post-secondary degree, 28.0% college, 13.0% certificate, 38.0% bachelor, and 8.0% masters. No difference in terms of demographics (age, gender and tenure) was found between the final sample of respondents (N = 185) and the hospital's general population of employees (N = 1843). To further examine whether subject attrition from time 1 to time 2 led to non-random sampling, the probability of remaining in the final sample (N = 185) among time 1 respondents (N = 545) could be predicted by demographics and substantive variables measured at time 1 (Goodman & Blum, 1996). The logistic

regression predicting the probability of remaining in the final sample, using age, organisational tenure, HIWPs and P-O fit as predictors, was non-significant and none of the predictors exerted a significant effect (results are available upon request). This indicates that respondent attrition was essentially random.

The research for Study 3 of this thesis was conducted on a random sample of unionised registered nurses (RNs) working in the Canadian public health care sector. The samples of nurses were stratified by mission and size of the institution to ensure representativeness. Overall, data was drawn from 105 hospitals. 6546 nurses were solicited for participation in the questionnaire, of which 2,174 returned a completed copy. This resulted in a response rate of 33.2%. Although this represents a relatively low response rate, this is comparable to other occupational stress research conducted among nurses (e.g. Jenkins & Elliot, 2004; Stordeur, D'hoore &Vandenberghe, 2001). 92.2 % of this sample was comprised of females, with an average age of 41 and with an average tenure of 15 years. The vast majority (50.3%) held a college diploma while 33.3% held a bachelor's degree. The limited information available indicates that respondents do not differ from the overall population in terms of gender, age, education and seniority.

1.4.3 Data Analysis

The use of the statistical package Mplus (version 6.12; Muthen & Muthen, 1998-2010) was used in all three studies of the thesis in order to test the proposed hypotheses. Specifically, structural equation modelling (SEM) and moderated SEM (MSEM) were used. The advantages of SEM over regression analysis include its ability to model latent variables, correct for measurement error, specify errors and their covariance structures and estimate entire theories simultaneously (Henseler, 2012; Oke, Ogunsami & Ogunlana, 2012). Its use was particularly advantageous in this thesis because most hypotheses centred on testing

numerous demands and resources as mediators of the relationship between employees perceptions of HIWPs and burnout. Previous empirical evidence demonstrates that structural equation modeling is superior to regression when testing mediation hypotheses (e.g. Iacobucci, Saldanha & Deng, 2007). The real strength of SEM is that it is possible to specify and estimate more complicated path models with intervening variables between the independent and dependent variables (Hox & Bechger, 1998). Therefore, it is only by using SEM, that it is possible to examine several job demands and resources as mediators of the relationship between HIWPs and burnout in the one explanatory model. As missing data was a potential issue for both studies, all analysis used the maximum likelihood method of estimation which estimates a likelihood function for each individual based on the present variables so that all available data can be used (Bollen, 1989).

1.5. Conclusion

In this chapter, the theoretical background of high involvement work practices and the debate surrounding their impact on employees' well-being was discussed. Next, the specific research questions to be addressed by the thesis were presented. Followed by this, the research methodology was discussed in terms of the theoretical contributions as well as the research context and data analysis approach employed. The three studies[2], which follow, examine the underlying mechanisms through which employees' perceptions of high involvement work practices impact burnout among health care employees. In the final discussion chapter, which follows from the three studies, the findings and contributions of these studies will be evaluated in terms of the overall research questions outlined above. The limitations of the overall research and a number of recommendations for future research and management practice will also be presented.

[2] Chapter Two and Chapter Three are submitted papers to peer reviewed journals and in order to keep them consistent with the journal, the style of writing and referencing system will be different to the rest of the thesis.

Chapter Two
Perceptions of High Involvement Work Practices and Burnout: The Mediating Role of Job Demands

This chapter is based on Kilroy, S., Flood, P.C., Bosak, J., & Chênevert, D. *Perceptions of high involvement work practices and burnout: the mediating role of job demands*, paper presented at the 8th Biennial International Conference of the Dutch HRM Network, *14-15-NOV-13, KU Leuven & Vlerick Business School, Leuven, Belgium* **Won Overall Best Paper Award**

This chapter is also in the second round of a revise and resubmit: Kilroy, S., Flood, P.C., Bosak, J., & Chênevert, D. *Perceptions of high involvement work practices and burnout: the mediating role of job demands*, *Human Resource Management Journal*

Perceptions of High Involvement Work Practices and Burnout: The Mediating Role of Job Demands

Abstract

This study examined the impact of perceived high involvement work practices (HIWPs) on job demands (role conflict, role overload and role ambiguity) and burnout (emotional exhaustion and depersonalisation). The study was conducted in a Canadian general hospital. Findings from structural equation modelling (N = 545) revealed that perceived HIWPs were significantly and negatively related to job demands and burnout. Role conflict and role overload have a significant positive association with emotional exhaustion and depersonalisation, while there is no effect for role ambiguity. Finally, role conflict and role overload partially mediate the relationship between perceived HIWPs and burnout. We discuss the theoretical and managerial implications of these findings for our understanding of perceived HIWPs influence on job demands and burnout.

2.1 Introduction

Over the last decade, significant challenges in health care provision have emerged as a result of policy reforms focusing on the introduction of new technology, cost cutting, and the introduction of market mechanisms into the health care sector (*e.g.* Townsend and Wilkinson, 2010). The human resource function in the hospital-based public sector faces a difficult situation as it must simultaneously promote positive work experiences and ensure reasonable workloads while maintaining employee wellbeing. Policy makers and academics now recognise that an engaged, healthy and motivated workforce is crucial to the delivery of high quality health care (Buchan, 2004; Veld *et al.*, 2010). The well-being of employees has attracted increased attention among researchers in HRM (*e.g.* Baptiste, 2008). Debate is on-going regarding the impact of HR practices on employee well-being. No consensus exists as to whether progressive HR practices (often referred to as high performance work practices, high commitment HR practices or high involvement work practices) have a positive or negative influence on employee well-being (*e.g.* Macky and Boxall, 2009; Wood *et al.*, 2012). Another research gap relates to the lack of clarity regarding the underlying processes that explain how HRM practices relate to employee well-being (*e.g.* Peccei *et al.*, 2013). Our paper examines how perceived high involvement work practices (HIWPs) relate to the experience of burnout amongst hospital employees achieved through examination of the underlying role of job demands. Although well-being has been defined as consisting of the health, happiness and relationship dimensions (Van de Voorde *et al.*, 2012), we focus solely on the health outcome of burnout. This is largely due to the paucity of studies which examine the impact of HIWPs on health outcomes (Van de Voorde *et al.*, 2012) and due to the fact that burnout is particularly acute among health care employees (Wood and Killion, 2007). Also, burnout is viewed as a proxy variable that reflects work-related stresses and thus it overcomes the research challenge of identifying the many different types of stresses which

could have combined effects (Shirom, 2010). This study contributes to existing knowledge in several ways. First, it investigates the relationship between HIWPs and burnout which is not well understood (*e.g.* Van de Voorde *et al.*, 2012). In doing so we shed further light on whether these HIWPs have a positive or negative influence on health-related outcomes for employees (*e.g.* Wood and de Menezes, 2011). Second, this study examines the underlying linkage mechanisms between HIWPs and the well-being outcome of burnout. Therefore, it adds unique insights into the dynamics surrounding this relationship by investigating the salience of unexplored job demands (*e.g.* Castanheira and Chambel, 2010). Third, this study assesses employees' perceptions of implemented HIWPs rather than relying on management reports of intended HIWPs in place (Bowen and Ostroff, 2004). In doing so it overcomes limitations associated with measurement error given that the vast majority of studies in HRM rely on one organisational representative (*e.g.* HR manager) for providing information on HIWPs (Heavey *et al*., 2013). Finally, this study responds to the calls for further investigation into the impact of job demands on burnout among health care professionals (*e.g.* Dasgupta, 2012).

2.2 Background and Theoretical Perspective

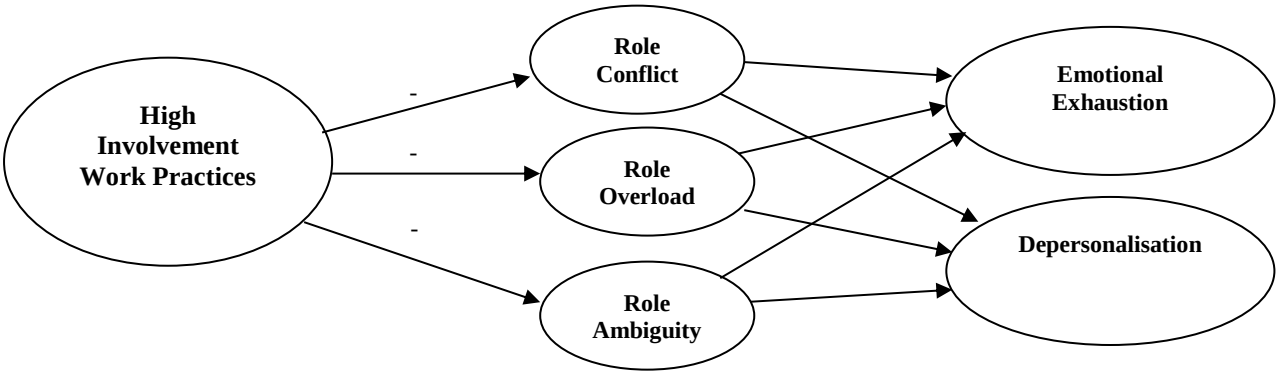
The terms high performance work systems, high commitment HR practices and high involvement work practices have been used interchangeably in the literature. Different inconsistent sets of practices have been used in previous studies and to overcome this as well as to identify practices that would raise performance, some authors focus on a specific bundle of "high involvement" practices (Guerrero and Barraud-Didier, 2004). Boxall and Macky (2009) note that in the current context, a focus on the high involvement stream advances our understanding of HRM and is the one best connected to critical workplace changes. In distinguishing high involvement work practices from high performance and high commitment

HR practices, they highlight how some high performance practices such as a grievance procedure may in some countries be simply required by law and therefore have little performance potential. Moreover, they note how some high commitment HR practices such as job security can be pursued without changing the structure of work such as enhancing job autonomy. The authors further note how the choice of HR practices should be context specific and linked to a broader organisational logic. In this regard it important to highlight that HIWPs are recognised as critical resources for health care employees (*e.g.* Rondeau and Wagar, 2006) and they create a context in which the patient-centered care model of delivering care is most effective (Avgar *et al.*, 2011). Therefore, following their theoretical reasoning, we focus on the high involvement stream. According to Lawler (1986) and Vandenberg *et al.* (1999), there are four key dimensions underpinning the HIWPs construct. These are power (P), information (I), rewards (R) and knowledge (K). Taken together these are referred to as the PIRK model (Lawler, 1986). The focus of the HIWPs approach is on empowering workers to make more and better decisions, enhance the information and knowledge needed, and rewarding them for doing so (Macky and Boxall, 2009). Using the PIRK model, empowerment (P), information sharing (I), rewards (R), and training for knowledge and skills acquisition (K) are the core dimensions of high involvement and have been included in most research (Guerrero and Barraud-Didier, 2004). Consistent with this operationalisation of HIWPs and based on previous research in the health care context (*e.g.* Tremblay *et al.*, 2010), we use empowerment, information sharing, non-monetary recognition and training and development practices. In accordance with the Ability-Motivation-Opportunity (AMO model) model (Appelbaum et al., 2000), improvements in knowledge enhance ability, while empowerment and information enhance the opportunity to contribute. Rewards are aimed at enhancing motivation, which may also be improved through empowerment (enjoying autonomous work), information (feeling better informed) and

knowledge (enjoying a growth in skills). Using the PIRK model, a number of authors have demonstrated that HIWPs are related to positive employee outcomes such as commitment (*e.g*. Vandenberg *et al*., 1999), job satisfaction (*e.g.* Butts *et al.,* 2009), and organisational citizenship behaviour (*e.g.* Chênevert *et al.,* 2013). Despite the positive effects associated with the PIRK model, it has been subject to much criticism. For example, stemming from the labour process theory perspective, some authors argue that high involvement management has negative effects on employee well-being outcomes as it intensifies work for those involved (Wood *et al.,* 2012). This debate has yet to be resolved and in the health care context, authors have called for further research to clarify this issue (Harley et al., 2007). We propose a model linking HIWPs, job demands and burnout which builds on Conservation of Resources (COR) theory. In doing so, we respond to calls from researchers to consider novel psychological resource theories to explain the relationship between HIWPs and employee well-being outcomes (Peccei et al., 2013). "COR theory posits that people seek to obtain, retain, and protect resources and that stress occurs when individual's resources are threatened with loss or when individuals fail to gain resources after substantive resource investment" (Hobfoll, 2002: 312). We demonstrate, in the proposed model, the "primacy of resource loss" and the "resource investment" principle which explains how perceived HIWPs could reduce job demands and, in turn burnout. While a number of additional theoretical perspectives bear relevance (e.g. the AMO framework), COR theory provides a more parsimonious and proximal theoretical approach to explain the underlying psychological processes through which perceived HIWPs influences burnout. Indeed, COR theory is among the leading theories in understanding employee burnout (*e.g.* Lee and Ashforth, 1996). One of the central features of HIWPs is that they increase employee autonomy and control which enables them to reduce job demands and alleviate burnout they experience (Castanheira and Chambel, 2010; Mackie *et al.,* 2001; Sun and Pan, 2008). These are critical resources for health care

professionals as they place a premium on having control and autonomy in their job (*e.g.* Laschinger and Havens, 1996).

Figure 2.1: Hypothesised relationships between HIWPs, job demands and burnout



2.3 HIWPs and Burnout

Burnout describes a state of mental weariness (Schaufeli and Bakker, 2004), and has been portrayed as a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment that usually occurs among people who work in emotionally demanding roles (Leiter and Maslach, 1988). Although the multidimensional nature of this construct has been vigorously debated, many authors advocate a two-dimensional concept that includes the components of emotional exhaustion and depersonalisation (*e.g.* Büssing and Glaser, 2000; Demerouti *et al.*, 2001). These authors argue that the specificity of the burnout syndrome lies in the combination of general reactions linked to stress - captured by the emotional exhaustion dimension - and specific attitudinal manifestations that signal a crisis in the

individual-work relationship, e.g. depersonalisation (Maslach *et al.,* 2001). Therefore we adopt this two-dimensional definition of burnout and excluded the third component from our definition. Emotional exhaustion involves 'feelings of being emotionally overextended and depleted of one's emotional resources' (Maslach, 1993: 20-21). "Depersonalisation (also known as cynicism or disengagement in the literature) describes a process whereby employees detach from their job and begin to develop callous or uncaring attitudes towards their job, their performance, and those associated with the job (e.g. patients, co-workers)" (Halbesleben and Buckley, 2004: 860). There are a number of factors that cause burnout in health care professionals such as the universal struggle of balancing self-care and other care (Skovholt *et al.,* 2001), high patient-to-staff ratios and excessive workload which is exacerbated by high levels of turnover (Aiken *et al.,* 2002). Nevertheless many of the factors that cause burnout are related to the organisation of work (Maslach *et al.,* 2001) and organisational interventions are gaining increased relevance as a mechanism to reduce burnout (*e.g.* Shirom, 2010). In their review of the burnout literature, Halbesleben and Buckley (2004) suggested that one way of reducing burnout is through appropriate HRM strategies. A number of studies suggest that HIWPs are negatively linked to the emotional exhaustion component (*e.g.* Castanheira and Chambel, 2010). Vanhala and Tuomi (2006) found that emotional exhaustion was slightly lower in organisations with sophisticated HR practices. However, from a wide range of HR practices, the only practices which had a relationship included health and safety programs, investment in training, and an open communication culture. Moreover, Sun and Pan (2008), using the COR theory as the theoretical lens, found that perceptions of high commitment HRM practices are negatively related to emotional exhaustion in a sample of manufacturing workers in China. An important omission in the aforementioned studies is that they did not consider the depersonalisation component of burnout (for an exception see Castanheira and Chambel, 2010). Although

exhaustion reflects the stress dimension of burnout, it fails to capture the critical aspects of the relationship people have with their work (Halbesleben and Buckley, 2004). This is particularly important in the health care context, as the relationship between employees and clients, i.e. patients in this study, is the central tenet of effective health care delivery. Extending previous efforts, emotional exhaustion and depersonalisation are used in defining burnout. Although the aforementioned studies found that HRM reduced burnout, a noteworthy exception is Kroon *et al.* (2009) who found that HR practices actually increased employee burnout (emotional exhaustion). This finding is consistent with the critical management-by-stress perspective and other studies which demonstrate that HIWPs can increase job demands and stress (*e.g.* Godard, 2001). The argument is predicated on labour process theory which posits that labour intensification and managerial controls are imperatives in capitalism (*e.g.* Wood *et al.*, 2012). One explanation for the inconsistent findings is that variations of HR practices and systems are commonly used. For example, Sun and Pan (2008) focus on salary, procedural justice, job stability and training, while Vanhala and Tuomi (2006) and Kroon *et al.* (2009) use a large number of practices ranging from training to selection. Therefore, many of the practices that could increase burnout, such as performance appraisal, are not reflected in the high involvement stream. Moreover, it's important to bear in mind from a methodological point of view that the results could vary depending on the source from which the HIWPs are rated (Nishii and Wright, 2008). Indeed Nishii and Wright (2008) note that one explanation for inconsistent findings in strategic HRM research might be explained by the failure to capture employees' perceptions and experiences of HR practices. Consistent with the majority of evidence on the negative link between involvement related HR and burnout, from the employee perspective, we expect that HIWPs will alleviate burnout. COR theory is one theoretical perspective that explains how this is likely to occur. The "resource investment" principle demonstrates how those with

higher resources (i.e. HIWPs) are less vulnerable to resource loss (i.e. burnout) and more capable of gaining resources to cope with burnout (Hobfoll, 2002). HIWPs are believed to be important for reducing burnout because they foster a supportive work environment and provide employees with the necessary resources to cope with the threat or actual loss of resources associated with burnout (Sun and Pan, 2008). Formally stated, we hypothesise that:

Hypothesis 1: Employees' positive perceptions of HIWPs will be negatively linked to emotional exhaustion

Hypothesis 2: Employees' positive perceptions of HIWPs will be negatively linked to depersonalisation

2.4 HIWPs and Job Demands

The literature in the health care context shows that role conflict, role ambiguity and role overload are job demands that employees commonly experience (*e.g.* Dasgupta, 2012). Role overload is experienced when the demands of one's work role exceed the resources available to meet them (Brown *et al.,* 2005). Role overload is often considered as a challenge stressor in jobs where there are high job demands contingently linked to prospects for advancement and achievement (*e.g.* Cavanaugh *et al.,* 2000). When employees experience role overload, they can often expand their efforts to cope with it (Le Pine *et al.,* 2005). However, over time, role overload may drain individuals' resources (Schaufeli and Bakker, 2004) and function as a "hindrance stressor" (i.e., demands that constrain individuals' development and work accomplishment). Consistent with COR theory (Hobfoll, 1989), such exposure to overload may lead to a depletion of one's resources. Role conflict refers to the incompatibility of

expectations and demands associated with the role (Rizzo *et al.,* 1970). It involves contradictory requirements, competing demands, and inadequate resources. Role ambiguity refers to the lack of specificity and predictability for an employee's job or role functions and responsibility (Kahn *et al.,* 1964). Individuals experiencing role ambiguity are unsure of what their role consists of and how role performance is measured (Kahn *et al.,* 1964). Role conflict and role ambiguity are considered as hindrance stressors, constraining individual development and work accomplishment (LePine *et al.,* 2005). Generally, employees are less likely to have control over these sources of stress.

In the health care context, HIWPs could be expected to increase job demands due to the added responsibility associated with discretion, accountability and work intensification (Wood *et al.,* 2012). Supporting this perspective, Kroon *et al.* (2009) found that HR practices increase job demands such as psychosocial job conditions. However, Castanheira and Chambel (2010) found that HIWPs reduced job demands (emotional dissonance and quantitative demands) in a study among call centre workers. Their use of the JD-C model demonstrates how HIWPs can offer a sense of control which enables employees to adjust to their job demands. Indeed, Sun and Pan (2008) argued that it is the responsibility of organisations to provide employees with adequate resources to meet their job demands. The conflicting results demonstrate the need to further investigate this relationship. Wood *et al.* (2012) highlighted that information sharing gives employees a greater understanding of the organisation's objectives and of their role in achieving these. It therefore, may reduce uncertainty in the work environment. Bottom up information sharing, together with training, could improve workers' capacity to deal with tasks because they provide the time and opportunity to discuss difficulties and share solutions (Castanheira and Chambel, 2010). Overall the discretion and opportunity for creativity afforded by HIWPs could enable employees to reduce the job demands or stressors they experience (Cavanagh *et al.,* 2000). In

accordance with the principle of "resource investment" associated with COR theory, resources (i.e. HIWPs) compensate for certain losses (i.e. resources invested to meet job demands) and indirectly help workers cope with job demands (Lee and Ashforth, 1996; Sun and Pan, 2008). HIWPs represent an important resource as they enable health care employees to overcome work demands and refocus their energies on their core mission - namely enhancing the quality of patient care and attending to patient needs (Avgar *et al.,* 2011). Therefore, we hypothesise that:

Hypothesis 3: Employees' positive perceptions of HIWPs are negatively associated with (a) role conflict, (b) role overload, and (c) role ambiguity.

2.5 Job Demands and Burnout

It is well known that exposure to job-related demands can lead to burnout (Schaufeli *et al.,* 1993). Job demands that health care employees typically face are role conflict, role overload and role ambiguity (*e.g.* Barber and Iwai, 1996). Greenglass *et al.* (2001) found in a sample of nurses that role overload was positively related to burnout. They concluded that nurses may be distancing themselves from patients as a reaction to their feelings of being emotionally drained by their job. Firth *et al.* (1989) showed that unclear expectations about nurses' roles i.e. role ambiguity, lead to higher levels of burnout. Moreover, Gil-Monte *et al.* (1993) and Stordeur *et al.* (2001) demonstrated that role conflict and role ambiguity are positively related to burnout among health care employees. Barber and Iwai (1996) found that role conflict and role ambiguity are significant predictors of burnout among staff caring for elderly dementia. Overall, Maslach *et al.* (2001) highlighted that qualitative job demands

such as role conflict, role overload and role ambiguity consistently show a moderate to high correlation with burnout. Due to the increased job demands that health care employees are exposed to, Dasgupta (2012) called for future research to examine the association between the above job demands and burnout in other regions while using a greater sample size. According to COR theory, strain occurs when individuals lack the power to obtain, retain and protect valued resources (Hobfoll, 1989). The 'primacy of resource loss' principle demonstrates that when these resources are threatened or lost and employees are unable to cope, burnout is the behavioural manifestation that ensues (Stordeur *et al.*, 2001). Job demands are perceived as losses because "meeting such demands requires an investment of valued resources (Lee and Ashforth, 1996: 129). In other words, in attempting to cope with job demands and protect ones resources, other resources have to be invested (e.g. spending more time and effort) which carries the risk of burnout (*e.g.* Schaufeli *et al.*, 2009). Therefore, consistent with COR theory and in conjunction with the above empirical evidence, we hypothesise that:

Hypothesis 4: *(a) Role conflict, (b) role overload and (c) role ambiguity are positively associated with emotional exhaustion.*

Hypothesis 5: *(a) Role conflict, (b) role overload and (c) role ambiguity are positively associated with depersonalisation.*

2.6 Mediating effect of job demands (role conflict, role overload and role ambiguity) in the relationship between HIWPs and Burnout

Although a number of propositions have been put forward to explain how HIWPs influence employee well-being outcomes, this link remains under-theorised (Peccei *et al.,* 2013; Wood and de Menezes, 2011; Wood *et al.,* 2012). Wood and de Menezes (2011) note that the JD-C model is the most frequently used theory and is key to our argument because HIWPs are aimed at providing greater control and discretion for employees which can reduce strain (*e.g.* Mackie *et al.,* 2001). Job demands have rarely been considered as potential mediators in the relationship between HIWPs and well-being outcomes such as burnout. The findings of Castanheira and Chambel (2010) indicate that HIWPs are negatively related to burnout and this is partially mediated by lower job demands (psychosocial job conditions) and higher autonomy. These authors called for future studies to analyse a broader range of job demands such as role conflict and role ambiguity given their prominence to worker burnout. Further theoretical exploration of how HRM translates into job demands and resources has also been echoed by Peccei *et al.* (2013). Consistent with Castanheira and Chambel (2010), Wood and de Menezes (2011) further suggested that future theoretical and empirical work is needed, both to assess their speculation that high involvement management may be linked to role ambiguity and role uncertainty and to extend this work by considering other contexts. Following calls from researchers to consider psychological resource theories such as COR in explaining the HRM-well-being relationship (Peccei *et al.,* 2013), we use COR theory (Hobfoll, 1989) to explain the proposed linkages between perceptions of HIWPs, job demands and burnout in this paper. HIWPs should enable employees to obtain sufficient resources to meet their job demands (while allowing them decide for themselves when to respond to demands) and gain an additional spiral of positive resources to alleviate burnout

(Sun and Pan, 2008). Although a small number of studies have proposed that HR practices are related to worker burnout (*e.g.* Sun and Pan, 2008), most have failed to examine how or why these relationships occur (Castanheira and Chambel, 2010). We propose that job demands (role conflict, role overload and role ambiguity) represent important underlying mechanisms through which HIWPs can influence burnout. Formally stated, we predict that:

Hypothesis 6: Employee perceptions of (a) role conflict, (b) role overload and (c) role ambiguity will mediate the relationship between HIWPs and emotional exhaustion.

Hypothesis 7: Employee perceptions of (a) role conflict, (b) role overload and (c) role ambiguity will mediate the relationship between HIWPs and depersonalisation.

2.7 Methods

2.7.1 Participants and Procedures

The present study was conducted in a Canadian general hospital. With the agreement of the HR Department Director, employees were invited to participate in the survey. The questionnaires were sent to employees' private addresses in hard copy format. From 1802 hospital employees contacted for participation, 545 completed the questionnaire. This represents a response rate of 30%. No significant difference in terms of demographics was found between this final sample of respondents (N = 545) and the hospital's general population of employees (N = 1802). In this sample 87.2% were women, average age was 44.72 years (SD = 10.21) and average tenure was 8.32 years (SD = 8.1). In terms of education, 16.7% of respondents held a secondary or vocational school diploma, 29.2% college diploma, 10.6% university degree, 32.9% bachelor, and 10.2% master's degree.

38 percent of employees were nursing and cardiorespiratory staff (e.g. auxiliary nurse, nurse, respiratory therapist). 10.9 percent of employees were paratechnical staff, auxiliary service and trade personnel (e.g. nurse's aid, kitchen staff, housekeeping, laundry, plumbing, maintenance, carpenter). 17.6 percent of employees were office personnel (e.g. secretary, archivist, office clerk, administration technician). 7.7 percent of employees were health and social services technicians (e.g. radiology technicians, laboratory technician). 16.8 percent of employees were health and social services professionals (e.g. psychologist, educator, social worker, dietician, physiotherapist). 8.9 percent of employees were supervisory staff (e.g. senior, senior managers, middle management).

2.7.2 Measures

Employees were asked to express their level of agreement with each statement on a Likert scale ranging from strongly disagree (1) to strongly agree (7).

2.7.3 High Involvement Work Practices

HIWPs, in this study, include autonomy representing empowerment (P), information sharing (I), reward (R), and training and development linked to acquiring knowledge and skills (K). The three item measure used for autonomy was adopted from the sub scales of the psychological empowerment scale by Spreitzer (1995). A sample item is "I can decide on my own how I go about doing my work". To measure information sharing, three items were adopted for each dimension (top-down and bottom-up) from a scale developed by Lawler, Mohrman and Ledford (1995). A sample item for top down information sharing is "employees are regularly informed about major projects in our organization". A sample item for bottom up information sharing is "The organization usually asks for employees' opinion when it considers adopting new rules, procedures or methods related to the organization of work". To measure non-monetary recognition, three items were adopted from Tremblay *et al.* (2000). A sample item is "exceptional contributions of employees are formally recognized by the organization". The measure for development practices was also adopted from Tremblay *et al.* (2000). Specifically, six items assessed the level of training and development that employees were exposed to. A sample item is "In our organization, we have access to the resources needed to improve our skills". All reliabilities pertaining to HIWPs were above .83 and are therefore deemed reliable (see table 2.1). Guerrero and Barraud-Didier (2004) demonstrated that HIWPs have a stronger effect on performance when combined on a latent factor rather than when used in isolation. Following this approach we treated HIWPs as a second order latent factor. The fit indexes for four first-order factors plus one second-order

latent factor was a very good fit to the data (χ2 (86) = 355.607, p < .001, CFI = .953, TLI = .943, RMSEA = .076, SRMR = .037), suggesting that the dimensions reflected the overall construct.

2.7.4 Role Conflict

We used six high-loading items from House, Schuler, and Levanoni's (1983) measure of role conflict. A typical item is "In my job, I often receive incompatible requests from two or more people at the same time". This scale had an internal consistency reliability of .74 in this study.

2.7.5 Role Overload

We used three items from the quantitative overload scale developed by Caplan *et al.* (1980). A typical item is "I regularly feel overloaded by my work". Internal consistency reliability was .79.

2.7.6 Role Ambiguity

We used five items from House *et al.'s* (1983) measure of role ambiguity. A sample item is "My responsibilities at work are clearly defined" (reverse coded). Internal consistency reliability was .69, which has been deemed as an acceptable threshold (Clark and Watson, 1995).

2.7.7 Burnout

Items linked to the two dimensions of burnout are taken from the MBI-HSS (Maslach and Jackson, 1996). Five items each were used to assess emotional exhaustion and depersonalisation. A sample item for emotional exhaustion is "I feel burned out from my work". Internal consistency reliability was .91. A sample item for depersonalisation is "I feel little enthusiasm for the work that I do". Internal consistency reliability was .88.

2.8 Analysis

To test our hypotheses we conducted structural equation modelling (SEM) in Mplus version 6.0 (Muthen and Muthen, 1998 – 2010) with Maximum Likelihood (ML) estimation. Mplus produces measures of overall model fit, generates estimates of the hypothesised relationships (unstandardised and standardised coefficients, standard errors and t-tests), calculates total effects, and provides measures of the proportions of variance explained. The goodness of fit of the SEM models was evaluated based on a range of fit indices including the χ^2 value, the Root Means Square Error of Approximation (RMSEA), the Standardised Root Means Square Residuals (SRMR), the Comparative Fit Index (CFI), and the Tucker Lewis Index (TLI). Levels of 0.90 or higher for TLI and CFI and levels of 0.06 or lower for RMSEA, combined with levels of 0.08 or lower for SRMR, indicates that models fit the data reasonably well (Arbuckle, 2003). In order to confirm the six factor structure (HIWPs, role conflict, role overload, role ambiguity, emotional exhaustion and depersonalisation) for the measurement model, a confirmatory factor analysis using latent variables was carried out in the first step. The theoretical model with structural paths was tested in the second step. The latent exogenous variables that captured job demands and the endogenous variable burnout were operationalised by three and two variables respectively. HIWPs were treated as a second order latent factor in this study. In order to test the mediating hypothesis, we compared the fit

of a fully mediated model and a partially mediated model which included direct and indirect paths.

2.9 Results

2.9.1 Measurement Models

According to Anderson and Gerbing's (1988) recommendations, it is necessary to assess the appropriate factor structure of the measures used in the current study prior to testing the structural model. We used the aforementioned fit indices in examining the distinctiveness of our study variables. Our overall hypothesised CFA model including six factors yielded a good fit to the data (χ2 (335) = 835.734 p < .001, CFI = .927, TLI = .918, RMSEA = .052, SRMR= .052). That model yielded a better fit to the data than any more parsimonious model, including a series of five factor models by combining job demands and the dimensions of burnout one by one as well as a one factor model (see Table 2.2). Models were compared using the chi square difference test (Bentler and Bonett, 1980). As the data was collected using self-reported measures, findings could be affected by common method bias. To test for this issue, we computed a confirmatory factor analysis for the six latent variables with and without a same-source first-order factor added test. This unmeasured latent method factor was set to have indicators of all self-report items, therefore, controlling for the portion of variance attributable to obtaining all measures from a single source (see Podsakoff *et al.,* 2012). As all factor loadings and intercorrelations were almost identical in both models, common method variance was not believed to be a source of bias in this study's data.

Table 2.1: Means, standard deviations, reliability coefficients and correlations.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1.Gender	.87	.33	-										
2.Education	2.91	1.31	.033	-									
3.Empowerment	5.68	1.22	.015	.078	(.86)								
4.Information	3.81	1.33	-.054	.102*	.276**	(.92)							
5.Reward	4.35	1.45	-.042	.036	.229**	.632**	(.90)						
6.Training	4.05	1.45	-.039	.012	.295**	.557**	.534**	(.83)					
7.Role conflict	3.62	1.12	-.042	.003	-.178**	-.299**	-.231**	-.218**	(.75)				
8.Role overload	4.57	1.42	.025	-.060	-.150**	-.255**	-.231**	-.152**	.525**	(.79)			
9.Role ambiguity	2.67	.90	.019	.148**	-.091**	-.152**	-.135**	-.167**	.145**	-.049	(.69)		
10.Exhaustion	3.77	1.55	.132**	-.134**	-.200**	-.354**	-.332**	-.255**	.460**	.575**	.089*	(.91)	
11.Depersonalisation	3.21	1.46	.090*	-.094*	-.276**	-.377**	-.341**	-.312**	.483**	.417**	.162**	.789**	(.80)

Note: * p<.05; ** <.01; ***p<.001

Table 2.2: *Confirmatory Factor Analysis of Measurement Models: Fit Indices*

Model	χ^2	***df***	$\Delta\chi 2$	**CFI**	**TLI**	**RMSEA**	**SRMR**
1. Hypothesised Six Factor Model	1568.701	603	-	.928	.921	.049	.051
2. Five Factor Model: **Job Demands**							
Combining role conflict and role overload	1825.733	688	257.032***	.907	.900	.055	.056
Combining role overload and role ambiguity	2039.256	688	470.555***	.889	.881	.060	.069
Combining role conflict and role ambiguity	1995.515	688	426.814***	.893	.885	.059	.061
3. Five Factor Model: **Burnout**							
Combining exhaustion and depersonalisation	1768.179	688	199.478***	.912	.905	.054	.053
4. One Factor Model	2694.293	350	1125.592***	.660	.633	.111	.098

N=545; χ^2 = Chi-square discrepancy, df = degrees of freedom; $\Delta\chi 2$= difference in chi-square; CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean-Square Error of Approximation; SRMR = Standardized Root Mean Square Residual

2.9.2 Structural Model and Hypothesis Testing

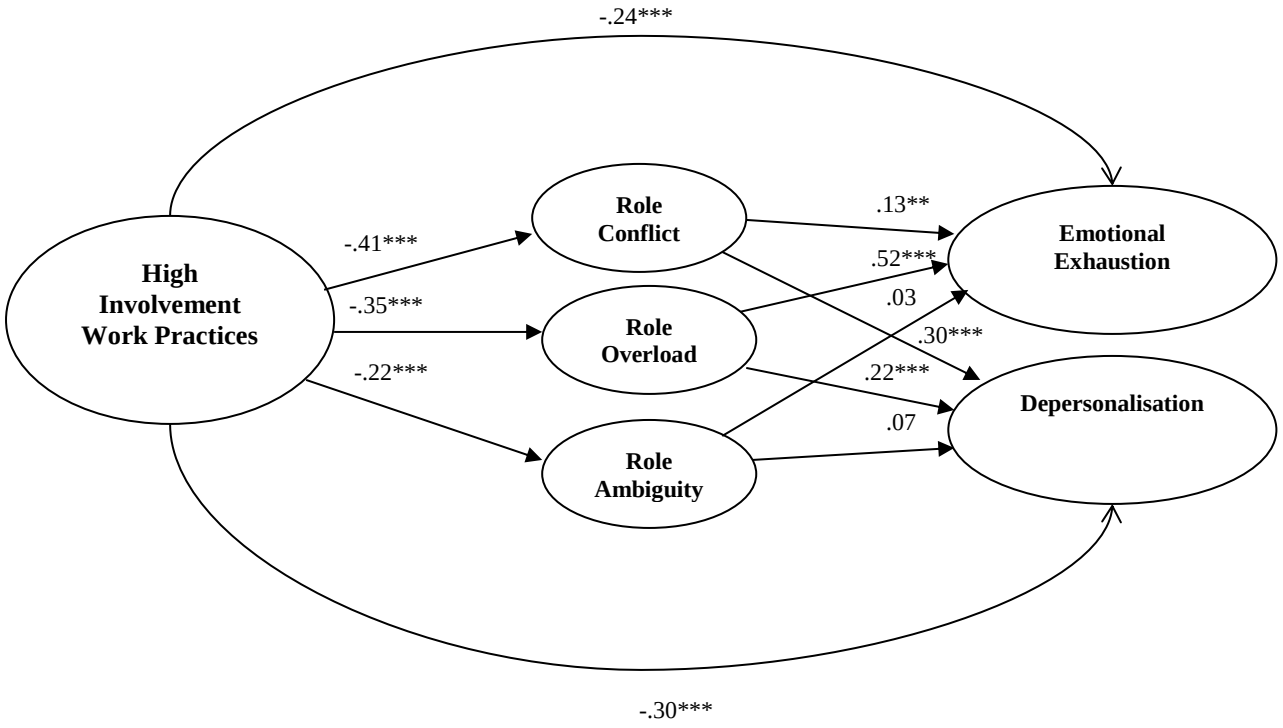
In the second model, we tested the overall structural model.

Hypotheses 1 and 2 proposed that positive perceptions of HIWPs would be negatively related to emotional exhaustion and depersonalisation respectively. The results show that HIWPs were indeed a significant predictor of emotional exhaustion (β = -.242, p < .001) and depersonalisation (β = -.305, p < .001). Therefore, Hypothesis 1 and 2 are supported.

Hypothesis 3 proposed that positive perceptions of HIWPs would be negatively related to job demands. HIWPs were a significant predictor of role conflict (β =-.414, p < .001), role overload (β = -.347, p < .001), and role ambiguity (β = -.220, p < .001). Hypotheses 3a-c are thus supported. Hypothesis 4 further predicted that job demands would be positively related to emotional exhaustion. Role conflict (β = .136 p < .01) and role overload (β = .517 p < .001) were both positively related to emotional exhaustion, while there was no effect for role ambiguity (β = .037 p > .05) there was no effect. Hypotheses 4a and 4b are thus supported, while hypothesis 4c is rejected. Hypotheses 5a-c predicted that job demands would be positively related to depersonalisation. Role conflict (β = .304 p < .001), role overload (β = .224 p < .001) and role ambiguity (β = .078 p < .05) were positively related to depersonalisation. Therefore, Hypotheses 5a-c are supported. Hypotheses 6a-c and 7a-c stated that job demands would mediate the relationship between HIWPs and the two dimensions of burnout. This was tested by comparing a fully indirect and direct structural model. The SEM model which specified full mediation of HIWPs on burnout through job demands displayed an adequate fit to the data, (χ2 (688) =1785.826, p < .001, CFI = .910, TLI = .903, RMSEA = .054, SRMR= .077). In the second model, job demands were hypothesised to partially mediate the associations between HIWPs and burnout; that is to say, the model was specified to include direct associations between HIWPs and burnout as well as indirect associations via job demands. Although the difference was modest, the fit statistics

for the partially mediated model were better than the fully mediated model ($\chi 2$ (686) = 1749.271, p < .001, CFI = .909, TLI = .902, RMSEA = .052, SRMR = .068) and explained 49% of the variance in emotional exhaustion and 40% of the variance in depersonalisation. Therefore, this model formed the basis for analysing the hypotheses. Overall, HIWPs have both a direct and indirect effect on emotional exhaustion through role conflict (β = -.057 p < .01), and role overload (β = -.179 p < .001) but there was no significant relationship for role ambiguity (β = -.008 p > .05). HIWPs also had a direct and indirect effect on depersonalisation through role conflict (β = -.126 p < .001) and role overload (β = -.078 p < .001) but there was no significant relationship for role ambiguity (β = -.017 p >.05). This suggests that role conflict and role overload partially mediated the relationship between HIWPs and burnout.

Figure 2.2: Relationships between HIWPs, job demands and burnout



2.10 Discussion

This study contributes to knowledge in several ways. First, it investigates the relationship between HIWPs and burnout. This examination sheds further light on the nature of balance in terms of whether managerial practices have a positive or negative influence on health-related outcomes for employees (*e.g.* Van de Voorde *et al.*, 2012). Consistent with previous research in a call center context which revealed a negative association between HIWPs and burnout (*e.g.* Castanheira and Chambel, 2010), we extend these findings to the hospital context. Our study confirms previous postulations that control and autonomy are vital resources for health care employees and one of the most important preventative measures that can be taken to alleviate burnout (*e.g.* Felton, 1998). Despite these findings on the stress-reducing effect of HIWPs, it is important to highlight that there is no consensus among researchers regarding the relationship between HIWPs and well-being outcomes within the broader HRM literature. Consistent with the unitarist perspective, most authors argue that properly designed HRM is beneficial for organisations and their employees (*e.g.* Appelbaum *et al.*, 2000). However, the critical management-by-stress perspective or 'exploitation hypothesis' argues that while high involvement management may increase performance, it might also intensify employee's job demands and have a negative impact on their well-being (*e.g.* Wood *et al.*, 2012). This study finds that not only do HIWPs reduce job demands but they also reduce employee burnout. Therefore this study rejects the 'exploitation hypothesis' and departs from the study of Kroon *et al.* (2009) who found that HPWPs were associated with higher job demands and burnout.

The second contribution of this study is that it examines the underlying mechanisms between the HIWPs and employee outcomes link. Of the few studies that have examined the impact of HIWPs on burnout, very few have sought to examine the intervening mechanisms that might explain this link (Castanheira and Chambel 2010). The results of this study are consistent with Castanheira and Chambel (2010) who found that HIWPs relate negatively to burnout

and this was mediated by job demands. However, they are contrary to Kroon *et al.* (2009) who found that HR practices were positively related to burnout which was also mediated by job demands. The research is important and represents a contribution as Castanheira and Chambel (2010) as well as Wood and Menezes (2011) called for researchers to consider how HIWPs relate to negative outcomes like stress and burnout by considering the role of job demands such as role conflict and role ambiguity. This study responds to these calls by considering role conflict, role overload and role ambiguity (three important job demands in the health care context) as mediators in this relationship. We also use COR theory and its associated principles of "resource investment" and "primacy of resource loss" to demonstrate how this occurs. In doing so, it addresses calls from researchers (*e.g.* Peccei *et al.,* 2013) to consider alternative theoretical explanations as to how HIWPs can influence well-being outcomes. Applying this theoretical perspective, the 'resource investment' principle demonstrates how HIWPs enable employees to obtain the necessary resources to meet their job demands while avoiding the resource loss and the associated impaired health consequences (i.e. burnout) as emphasised in the 'primacy of resource loss' principle. However, there was no mediating effect of role ambiguity in the relationship between HIWPs and burnout. It could be the case that health care employees are more stress tolerant to role ambiguity when compared to role overload and role conflict (Idris, 2011). Indeed the ability to tolerate ambiguity is what often draws those into the helping profession (Skovholt *et al.,* 2001). Also, in the economic climate that has prevailed over the last few years, most employees are required to be more flexible and tolerate such role ambiguity. Although there was no mediating effect, results still indicated that HIWPs had a significant negative relationship with role ambiguity. Wood and de Menezes (2011) argued that high involvement management may reduce role clarity or increase role ambiguity because there could be uncertainty surrounding the proactivity they should exhibit in response to HIWPs. There is no

evidence for this contention in the current study. HIWPs with the focus on relinquishing control enable employees to better deal with their job demands. Our finding that positive perceptions of HIWPs ameliorate role overload and role ambiguity is important given the recent findings of Leggat *et al.* (2011) who found that an appropriate workload and role clarity among employees positively influences organisational performance in health care.

The third contribution of this study is that it measures employees' perceptions of HIWPs thus recognising that individuals may experience and respond differently to HIWPs even within an organisation (*e.g.* Bowen and Ostroff, 2004). This may reduce measurement error because of employees' exposure to HR practices as actually implemented, and the possibility of obtaining ratings from multiple employees (Heavey *et al.,* 2013). That said, most of the literature in HRM is preoccupied with surveying a single HR representative for data on HR practices and other company information (Gerhart *et al.,* 2000). While HR managers may be better able to provide information on intended HR practices, they may be less able to provide accurate information concerning their actual implementation (Heavey *et al.,* 2013). Indeed relying on HR managers implicitly assumes that all employees receive the same set of HR practices and that a single organisational respondent can represent the views of all organisational members (Nishii and Wright, 2008). Assessing employees' perceptions of HIWPs is in line with the compelling findings of Bowen and Ostroff (2004) and Nishii and Wright (2008) who argued that HR practices are perceived and interpreted subjectively by each employee which causes variation in employees' responses. Therefore, in the context of previous studies results and our findings, it may be important to bear in mind that the impact of HIWPs on employee well-being outcomes may partly depend on who is rating the HR practices (Heavey *et al.,* 2013; Van de Voorde *et al.,* 2012). The fourth contribution of this study is that it further investigates the relationship between job demands and burnout in the health care context in Canada (Dasgupta, 2012). The results provide additional support for

existing studies which show that role conflict and role overload are significant predictors of burnout among health care professionals (*e.g.* Greenglass *et al.,* 2001). Indeed they perceive role conflict and role overload as important stumbling blocks for them which influences their well-being. In more serious cases, individuals who experience such burnout often feel that they no longer have the necessary resources to predict, understand and control the demands confronting them (Wright and Hobfoll, 2004). Despite this, role ambiguity failed to predict burnout. This finding is in contrast to much of the literature in the area. For example, Idris (2011) using a cross-sectional and time lagged design found that role ambiguity had a detrimental effect on burnout among academics. However, they are consistent with Peiro *et al.* (2001) who found that role ambiguity failed to predict depersonalisation among health care professionals. Nevertheless, Peiro and colleagues investigated this relationship over time. As pointed out above, a possible explanation for these findings relates to the fact that health care employees are perhaps more able to tolerate high levels of role ambiguity (Idris, 2011). Indeed, other research highlights that health care professionals thrive in ambiguous environments and this acts as a driver rather than a demand (Skovholt *et al.*, 2001).

2.10.1 Limitations

This study was cross-sectional, thus, causal inferences cannot be made. Therefore a time lagged or longitudinal research design would be beneficial in future research. This study is also restricted in terms of common method bias. However, we tested for this issue by computing a confirmatory factor analysis for the latent variables with and without a same-source first-order factor added test. Overall, common method bias was a not a source of bias in this study's data. Self-report methods may also represent the only direct and valid method of gathering information about individual perceptions in the workplace (Chan, 2009). Some authors have highlighted that reactions to HR practices as experienced by employees

themselves is the appropriate level of measurement (*e.g.* Bowen and Ostroff, 2004). Another limitation may be that because of organisational restrictions, shortened versions of scales were used to measure the constructs. However, items were strategically selected based on factor analysis of previous studies, face validity and relevance to the context (*e.g.* Tremblay *et al.*, 2010). Finally, we used burnout to define the health aspect of well-being. While burnout is particularly relevant to study in the health care context (Maslach *et al.*, 2001), it is only one part of the story given that well-being also includes happiness and relationship dimensions. Therefore, studying happiness and relationship aspects of well-being in addition to burnout would be an interesting avenue for further research.

2.10.2 Research Implications

This study contributes to our knowledge of the HIWPs and well-being relationship. The results demonstrate that HIWPs reduce burnout both directly and indirectly via the job demands of role conflict and role overload. In order to broaden our understanding of these relationships it would be beneficial for future research to use multilevel modelling techniques (Sun and Pan, 2008). While our study finds a partial mediating effect of role conflict and role overload in the relationship between HIWPs and burnout, other factors could account for this relationship. Echoing previous postulations (*e.g.* Peccei *et al.*, 2013), the inclusion of a broader range of job demands and resources should receive even more investigation in addressing the underlying mechanisms that explain the relationship between HIWPs and employee well-being outcomes (Castanheira and Chambel, 2010).

2.10.3 Managerial Implications

The COR model suggests that if we can reduce demands and supplement resources for workers, burnout should be reduced. This would suggest that organisations should manage the job demands and resources that employees face (Halbesleben and Buckley, 2004). We note that one important way of reducing job demands and burnout among health care employees is through the use of HIWPs. Of these job demands, role conflict and role overload are significant precursors to both dimensions of burnout while role ambiguity influences the depersonalisation dimension. Therefore for managers to promote positive health for their employees, they should focus on implementing these four HIWPs. As burnout has been directly linked to the quality of patient care across a wide range of countries (Poghosyan *et al.,* 2010), the findings of this study have important ramifications for hospital management in terms of improving organisational performance.

Chapter Three
Perceptions of High Involvement Work Practices, Person-Organisation Value Congruence and Burnout: A Time Lagged Study of Health Care Employees

This chapter is based on: Kilroy, S., Flood, P.C., Bosak, J., & Chênevert, D. Employees 'words' on high involvement work practices, value congruence and burnout, *Abridged version of paper published in the best paper proceedings of the Academy of Management Annual Meeting, Phildadelphia, 05-AUG-14 –10-, Philadelphia, USA*
Won one of Best Accepted Papers

This chapter is in the second round of a revise and resubmit: Kilroy, S., Flood, P.C., Bosak, J., & Chênevert, D. (2014). Perceptions of High Involvement, Person-Organisation Value Congruence and Burnout: A Time Lagged Study of Health Care Employees. *Human Resource Management*

Perceptions of high involvement work practices, person--organization fit and burnout: A time lagged study of health care employees

Abstract

This article examined the impact of perceived high involvement work practices (HIWPs) on person-organization value congruence (P-O fit) and long term burnout. The study was conducted in a Canadian general hospital. Findings from structural equation modeling (N = 185) revealed that perceived HIWPs were significantly positively associated with P-O fit. While there was no direct effect of HIWPs on burnout, P-O fit fully mediated the relationship between perceptions of HIWPs and burnout. We discuss the implications of these findings for our understanding of HIWPs influence on P-O fit and burnout.

3.1 Introduction

Significant challenges in health care provision have emerged as a result of policy reforms which have resulted in the introduction of new technology, cost cutting, and market mechanisms to the health care sector (e.g., Townsend & Wilkinson, 2010). As a result, the human resource function in the hospital based public sector is faced with overcoming such challenges while ensuring that employee well-being is maintained. Indeed many authors believe that the quality of health care delivery is dependent on the strength and well-being of the human resource (e.g., Buttigieg, West, & Dawson, 2011). Previous research has investigated and found support for the notion that high involvement work practices positively impacts organisational performance in the private sector (e.g. Vandenberg, Riordan, & Eastman, 1999), and this finding has now extended to the health care sector (e.g., Harris, Cortvriend, & Hyde, 2007). Indeed, researchers have found that HR practices have a prominent role in reducing medication errors (e.g., Preuss, 2003), mortality rates (e.g. West et al., 2002) and improving patient satisfaction (Avgar, Givan, & Liu, 2011). However the effect of HIWPs on employee well-being outcomes in general (e.g., Van de Voorde et al., 2012) and in the health care sector in particular (e.g., Harris et al., 2007) is not well understood. It is still not clear whether they have a positive or negative influence on employee well-being outcomes (e.g., Wood, van Veldhoven, Croon, & de Menezes, 2012).Van de Voorde, Paauwe and van Veldhoven (2012) conclude that the impact of HR on well-being depends on the type of well-being that is studied and that very few studies have focused on negative health well-being outcomes such as burnout. Previous research demonstrates that perceptions of HIWPs are related to positive outcomes such as commitment (Paré & Tremblay, 2007) and job satisfaction (Butts, Vandenberg, Dejoy, Schaffer, & Wilson, 2009). Although studies on negative health outcomes are rare (Van de Voorde et al., 2012), this limited research has also found that HIWPs play an important role in the reduction

of stress (e.g., Butts et al., 2009) and burnout (e.g., Castanheira & Chambel, 2010). It is important to note that most studies examining the relationship between HIWPs and negative outcomes such as burnout use a cross-sectional research design and therefore it remains to be seen whether HIWPs can ameliorate burnout over time. Another major research gap concerns the lack of clarity regarding the underlying processes that explain how HRM practices relate to employee well-being outcomes in general (e.g., Peccei, van de Voorde, & van Veldhoven 2013) and burnout in particular (Castanheira & Chambel, 2010). Recent research has highlighted that person-organization fit (P-O fit) could be an important factor that explains how HR practices can transmit their effects on employee outcomes (Boon, Den Hartog, Boselie, & Paauwe, 2011). Therefore, this study examines the impact of employees' perceptions of a set of HIWPs on long term burnout and considers the possible mediating effect of P-O fit in this relationship. This study adds to the existing literature in several ways. First, it responds to calls from researchers to examine the impact of HIWPs on health well-being outcomes and a particular novelty is the examination of this relationship over time (Van de Voorde et al., 2012). Second, it adds to previous studies (Boon et al., 2011) which have explored the mediating effect of P-O fit in the HRM-outcomes relationship. It further represents a contribution to the extent that no studies, to the authors' knowledge, have examined the mediating role of P-O fit in the HIWPs-burnout relationship. Therefore, this study enables further insight into the dynamics surrounding this relationship and in doing so contributes to our understanding of the 'black box' problem in terms of how HIWPs impact burnout (Castanheira & Chambel, 2010). Third, this study is one of a very few that investigates the association between P-O fit and burnout (e.g., Siegall & McDonald, 2004) and the only one which investigates this relationship using a time lagged research design. Finally, this study redresses an imbalance in the literature related to the dearth of studies

examining the impact of HRM on employee outcomes in the health care sector (e.g., Townsend & Wilkinson, 2010).

3.2 High Involvement Work Practices and Well-Being

The terms high performance work systems, high commitment HR practices and high involvement work practices have been used interchangeably in the literature. While they all have significant merit, Macky and Boxall (2009) highlight the high involvement stream to be particularly important in the current context of workplace change and considers it the most useful for constructing theoretical models of HPWP. In their view, HR systems should be tied to a broader organisational logic and be relevant to the context. In this case, it's important to highlight that HIWPs are part of a hospital's logic to promote humanistic values such as autonomy and control over work which are important resources for health care employees (Harmon et al., 2003; Rondeau & Wagar, 2006). Such HIWPs are also seen as a key factor for improving patient care and are purported to complement other management innovations in health care, such as the patient-centered care model (PCC), which emphasises clients' needs and preferences to improve the quality of patient care (e.g., Avgar et al., 2011). Therefore, following such theoretical reasoning as well as the particular application of HIWPs in the health care context, we focus on the high involvement stream. Vandenberg et al. (1999) developed a research framework based on Lawler's (1986) PIRK model and specifically proposed that high involvement work practices encompass four dimensions, that is, workplace power (P), information (I), rewards (R) and knowledge (K). The focus of these practices is on empowering workers to make better decisions, enhance the information and knowledge that they need to do so and reward them for doing so (e.g., Macky & Boxall, 2008). Empowerment, information sharing, rewards and development practices are the core practices for high involvement and have been included in most research on HIWPs (Guerrero & Barraud-Didier, 2004). Therefore, similar to previous research in the health care context

(e.g., Tremblay, Cloutier, Simard, Chênevert, & Vandenberghe, 2010), these practices were adopted in this study. Previous research demonstrates that HIWPs have a stronger effect when combined rather than when used in isolation (e.g., Guerrero & Barraud-Didier, 2004). As HIWPs are a collective set of mutually reinforcing practices that have synergistic effects (Vandenberg et al., 1999) employees must perceive high levels on all four attributes of the PIRK model (Riordan, Vandenberg, & Richardson, 2005). On this basis, we treated HIWPs as a second order latent construct. In line with process models of HRM (e.g., Nishii & Wright, 2008), we measure employees' perceptions of HIWPs rather than relying on management reports of the HIWPs in place. This is consistent with the notion that there may be a difference between the HIWPs intended and implemented by management and those perceived and experienced by employees. Consistent with the unitarist or 'mutual gains' perspective, most authors argue that properly designed HRM is beneficial for organisations and their employees well-being (e.g., Appelbaum et al., 2000). However, the critical management-by-stress perspective argues that while high involvement management may increase performance, it might also intensify employees' job demands and have a negative impact on their well-being (e.g., Wood et al., 2012). There is considerable debate in the literature regarding which perspective holds true. A recent meta-analytic review suggests that a 'mutual gains perspective' is more common for positive well-being outcomes while a conflicting outcomes perspective is more common when focusing on negative well-being outcomes albeit few studies have addressed such negative outcomes (*e.g.,* van de Voorde et al., 2012). Although addressing this debate is beyond the scope of the present study, we contribute to the debate regarding the influence of HIWPs on employees' health related well-being. In accordance with recent empirical evidence linking HIWPs to lower burnout (e.g. Castanheira & Chambel, 2010), and in conjunction with Conservation of Resources (COR) theory, which views HIWPs as positive resources for employees (e.g., Rondeau & Wagar,

2006; Sun & Pan, 2008), we adopt a positive perspective regarding the influence of HIWPs on well-being. However, similar to Vanhala and Tuomi (2006), we acknowledge that the link from HIWPs to burnout might be too distal and therefore examine a possible intervening mechanism that may explain this link, i.e. P-O fit.

3.3 HIWPs and P-O fit

Kristof (1996, p. 4) defines P-O fit as 'the compatibility between people and organizations that occurs when: (a) at least one entity provides what the other needs or (b) they share similar fundamental characteristics or (c) both'. This definition recognises two different conceptualisations: supplementary fit and complementary fit (Kristof, 1996). *Supplementary fit* is achieved when individuals possess characteristics that are similar to other individuals in an organization (Muchinsky & Monahan, 1987), (i.e. when both the individual and the organization are similar) (Kristof-Brown, Zimmerman, & Johnson, 2005). *Complementary fit*, on the other hand, is achieved when an individual's characteristics add something that is missing to the organization (Muchinsky & Monahan, 1987). Similarities exist in terms of values, attitudes, personality, traits or goals (Kristof-Brown et al., 2005). However, value congruence is the most common operationalization which represents the similarity between individual values and those of the organization and its members (Chatman, 1989; Kristoff, 1996). Schneider's (1987) Attraction-Selection-Attrition (ASA) framework is one of the most influential models in the P-O fit literature. This framework helps explain the process by which HR practices may affect P-O fit between people and their organizations (Boon et al., 2011). The main idea of the ASA framework is that organizations attract, select and retain people whose personal characteristics are suited to an organization's design (Schneider, Smith, Taylor, & Fleenor, 1998). Different kinds of people are attracted to different kinds of organizations based on an organization's character. Through both formal and informal

selection strategies, organizations then choose those people who best fit the organizations character. Finally, the attrition process implies that people who do not fit tend to leave the organization. Boon et al. (2011) argue that HRM practices may increase P-O fit by consistently communicating the values and characteristics as well as the demands and expectations of the organization and by providing resources to employees to enhance their knowledge, skills and abilities. Another theoretical approach linked to the ASA framework which may explain the link between a set of high involvement HR practices and P-O fit is COR theory (Wheeler, Halbesleben, & Shanine, 2013). COR theory posits that people seek 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, p. 516). Wheeler et al. (2013) acknowledge that while COR is not a P-O fit theory per se, it could be viewed as an assessment of whether or not an individual has the personally valued resources defined as "objects, personal characteristics, conditions or energies that are valued by the individual" (Hobfoll, 1989, p. 516). Idiographic approaches to resources suggest that resources hold value to the extent that they increase fit between a person and his or her environment (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). In this regard it is known that one important resource for health care employees are HIWPs (Rondeau & Wagar, 2006), where autonomy and empowerment are embraced as core underlying values (Harmon et al., 2003). Magnet status hospitals value and embrace a culture indicative of high involvement (e.g. fewer hierarchical levels, autonomy and control in decision making) and these are seen as "special places to work by those inside and outside the organisation – people actively seek them out for employment" (Rondeau & Wagar, 2006, p.245). Such employer of choice organizations excel in providing employees with on-going feedback, career development and communication (e.g., Curran, 2003). Morelli and Cunningham (2012) conceived of resource value in terms of the importance of the resource to the individual. In this regard, greater

importance is put on resources which are consistent with the personal values of the individual. To the extent that health care employees value a culture and climate of high involvement and the organisation values this and provides the resources to build this culture (e.g. HIWPs) then greater fit is likely to occur. While empowerment and its associated principles reflect the match between the individual and the organisation, the role of information sharing, reward and development practices are critical. Indeed reward and information sharing need to be structured to both reflect and support the underlying values (Harmon et al., 2003), while training and development activities are necessary in order to ensure that employees feel comfortable and competent to exercise their increased decision making power (Rondeau & Wagar, 2006). From this perspective one could argue that HIWPs act as a resource caravan passageway (Hobfoll, 2011) which represent the environmental conditions that support, foster, enrich and protect the resources of individuals. More specifically, HIWPs could support and protect valuable P-O fit resources. In addition, as P-O fit reflects the personal resources that enable employees to meet the demands in their work environment, continued assessments of positive P-O fit ensures that such demands are assessed in the context of having surplus resources (Wheeler et al., 2013). Therefore, employees with high P-O fit are less vulnerable to resource loss. Indeed Avgar et al. (2011) argue that HIWPs enable health care employees to overcome work demands and refocus their energies on their core mission - namely enhancing the quality of patient care. Although previous research has largely focused on the selection process in improving P-O fit in general (e.g., Cable & Judge, 1997; Kristof-Brown, 2000), the role of other HR practices in establishing and maintaining P-O fit has received much less research attention (Boon et al., 2011). Following authors' recommendations to consider additional practices besides selection (Boon et al., 2011; Ehrhart & Zieger, 2005), we focus on the role of HIWPs in terms of

enhancing P-O fit. Consistent with the above theoretical perspectives and existing empirical evidence we propose that:

Hypothesis 1: Positive perceptions of HIWPs will be positively associated with P-O Fit

3.4 P-O fit and Burnout

Burnout describes a state of mental weariness (Schaufeli & Bakker, 2004), and has been portrayed as a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment (Maslach & Leiter, 1988). Although the operationalization of the burnout construct has been debated, most authors advocate a two-dimensional concept that includes the emotional exhaustion and depersonalization components (e.g., Büssing & Glaser, 2000). It is argued that the specificity of the burnout syndrome lies in the combination of general reactions linked to stress - captured by the emotional exhaustion dimension - and specific attitudinal manifestations that signal a crisis in the individual-work relationship captured by the depersonalization dimension (Maslach, Schaufeli, & Leiter, 2001). While the outcomes of P-O fit have been previously investigated (see Kristoff-Brown et al., 2005 for a review), much less research has focused on its relationship with burnout. However, theoretical and empirical progress has been made in this area. One line of enquiry to explain how P-O fit relates to burnout is found in the ideas of Maslach and Leiter (1997) who formulated a model that focuses on the degree of match, or mismatch, between the person and various domains of his or her job environment. According to these authors, burnout occurs when there is a chronic mismatch between people and their work situation in terms of the following six situational factors; workload, control, reward, community, fairness and values. A mismatch could occur in values when the organization makes choices that are inconsistent with their core values and their staff member's values (Siegall & McDonald, 2004). The greater this

mismatch between the person and the organizational environment, the greater the likelihood of experiencing burnout and vice versa. When people feel aligned with the values of the organisation they are more energetic, involved and effective at what they do, while a mismatch in values can result in employees' tendencies to question the employment relationship itself, thus, ultimately leading to burnout (Leiter & Maslach, 2001). Consistent with this model of burnout, Siegall and McDonald (2004) found that P-O fit was strongly and negatively associated with burnout among university professors. Another way of viewing P-O fit and its relationship to burnout is through the lens of COR theory (Hobfoll, 1989). According to Wheeler et al. (2013), in P-O fit terms, when an individual lacks or loses resources indicative of P-O fit, COR predicts that this individual will experience burnout. This is in line with the "primacy of resource loss" principle whereby the threat or actual loss of resources results in burnout which employees are motivated to alleviate. Conversely, if individuals ably manage this resource process and feel sufficient P-O fit, they will feel good about their work environment and will have ample resources to invest in the environment to protect against or alleviate burnout. In accordance with the theoretical perspectives and empirical evidence outlined above, we hypothesize that:

Hypothesis 2: Positive perceptions of P-O Fit will be negatively related to (a) emotional exhaustion and (b) depersonalization

3.5 *Mediating role of P-O fit in the relationship between HIWPs and Burnout*

Although a number of propositions have been put forward to explain how HIWPs influence employee well-being outcomes, this link remains under-theorized (e.g., Wood et al., 2012). The job demands-control model is the most commonly used theoretical explanation (e.g., Wood & de Menezes, 2011). It is also central to our argument, given that HIWPs are aimed at providing greater control and discretion for employees (e.g., Mackie et al., 2001). However COR theory is the leading theory in understanding employee burnout (e.g., Lee & Ashforth, 1996). It also represents a unique approach in terms of theorizing about the relationship between HIWPs and well-being outcomes (e.g., Peccei et al., 2013). COR theory posits that HIWPs can provide employees with the necessary resources to cope in their work environment and to deal with the experience of burnout (Sun & Pan, 2008). However, the link from HRM to burnout is distal and thus it is necessary to consider mediating variables (Vanhala & Tuomi, 2006). This is especially likely to be the case when investigating burnout over an extended time period. As higher P-O fit is viewed to lead to a reduction in burnout (Siegall & McDonald, 2004) and the goals of HR practices are to increase P-O fit (Boon et al., 2011), it is plausible to suggest that the relationship between perceived HIWPs and burnout could be mediated via P-O fit. In accordance with the ASA framework (Schneider, 1987) research demonstrates that a general set of high performance HR practices can increase P-O fit (e.g., Boon et al., 2011). In line with COR theory, Wheeler et al. (2013) posits that resources create a resource caravan (resources are linked to other resources), which leads to increased perceptions of global P-O fit and creates a resource 'gain spiral' of P-O fit. Similar to this notion, we argue that perceptions of HIWPs are key signals of resources that are important for enhancing employees P-O fit. As employees develop P-O fit, a reduction in the levels of burnout they experience is expected (e.g., Siegall & McDonald, 2004). Consistent with the COR perspective, when an individual feels sufficient P-O fit, they will feel good

about their work environment and possess surplus resources that may be reinvested back into their work environment to alleviate burnout (Wheeler et al., 2013). Kristof-Brown et al. (2005) noticed that fit has been studied independently and suggested a need to study it within the context of other meaningful predictors and work outcomes. Although a number of authors have examined the mediating role of P-O fit in terms of the relationship between HR and positive outcomes such as satisfaction, commitment, and organizational citizenship behaviour (Boon et al., 2011), none have so far considered its role in the HIWPs-burnout relationship. Based on the above theoretical perspectives and empirical evidence we hypothesize that:

Hypothesis 3: P-O Fit will mediate the relationship between perceptions of HIWPs and (a) emotional exhaustion and (b) depersonalization

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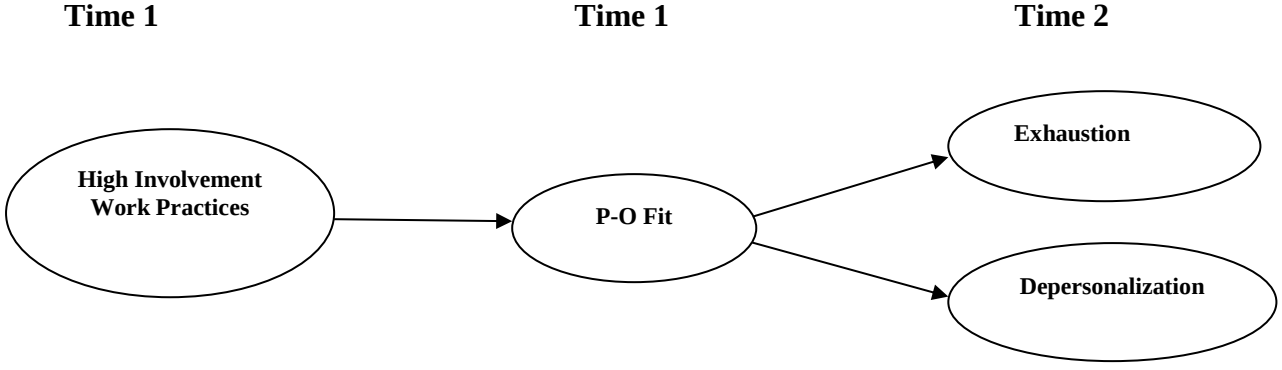
Figure 3.1: Hypothesised relationships between HIWPs, P-O fit and Burnout



3.6 METHOD

We used a time-lagged design to investigate the effects of perceived HIWPs on burnout via P-O fit. The study was conducted in a Canadian general hospital. With the agreement of the HR Director, employees were invited to participate in a survey about work attitudes. Two questionnaires including the study's measures were sent to employees' private addresses. The first questionnaire was sent in January 2008 whereas the second was sent in January 2011. The survey packet included a letter co-signed by the HR Director and the researchers explaining the purpose of the study and ensuring that participation was voluntary and data would be kept confidential. Of the 1,802 employees who were contacted for participation in 2008, 530 filled out the first survey questionnaire and returned it to the researcher's office. In 2011, from an overall population of 1,843 employees, 507 filled out the second survey questionnaire and returned it to the researchers. 185 respondents completed surveys at both Time 1 and Time 2. Analyses were conducted on this final sample of employees, representing an overall 10.15% of the overall population of employees. In this sample, 91.0% were women, average age was 48.80 years, and average tenure was 14.99 years. Seventy-one percent of respondents were members of the nursing or paramedical staff, and 72.7% were employed full-time. In terms of education, 87% of respondents held a post-secondary degree: 28.0% college, 13.0% certificate, 38.0% bachelor, and 8.0% masters.

No difference in terms of demographics (age, gender and tenure) was found between the final sample of respondents (N = 185) and the hospital's general population of employees (N = 1843). To further examine whether subject attrition from Time 1 to Time 2 led to non-random sampling, we tested whether the probability of remaining in the final sample (N = 185) among Time 1 respondents (N = 530) could be predicted by demographics and substantive variables measured at Time 1 (Goodman & Blum, 1996). The logistic regression predicting the probability of remaining in the final sample, using age, organizational tenure, and HIWPs

and P-O fit as predictors, was non-significant and none of the predictors exerted a significant effect (results are available upon request). This indicates that respondent attrition was essentially random.

3.6.1 Measures

The predictor variables in the present study are HIWPs and P-O fit while the two core dimensions of burnout (emotional exhaustion and depersonalization) are the outcome variables. Employees were asked to express their level of agreement with each statement on a Likert scale ranging from Strongly disagree (1) to Strongly agree (7).

3.6.2 High Involvement Work Practices

High involvement work practices were assessed using the core practices for high involvement, namely, empowerment, information sharing, rewards and development practices (Guerrero & Barraud-Didier, 2004). The measure for empowerment was adopted from the psychological empowerment scale by Spreitzer (1995). Specifically three items were used from the autonomy subscale. A sample item is "I can decide on my own how I go about doing my work". To measure top down and bottom up information sharing, three items each were adopted from Lawler et al. (1995). A sample item for information sharing is "employees are regularly informed about major projects in our organization (e.g., structural changes, major investments, new technologies). To measure non-monetary recognition, three items were adopted from Tremblay, Guay, Simard and Chênevert (2000). A sample item is "exceptional contributions of employees are formally recognised by the organization "e.g., during ceremonies or meetings, through the organization's newsletter, by congratulatory letters, with gifts). The measure for development practices was adopted from Tremblay et al. (2000). Specifically, three items assessed the level of training and development that

employees were exposed to. A sample item is "In our organization, we have access to the resources needed to improve our skills" All Cronbach's alphas pertaining to measuring HIWPs were above .80 and are therefore deemed reliable (see table 3.1). Guerrero and Barraud-Didier (2004) demonstrated that HIWPs have a stronger effect on performance when combined on a latent factor rather than when used in isolation. Following this approach we treated HIWPs as a second order latent factor.

3.6.3 P-O fit

P-O fit can be assessed by using either direct or indirect measures (Kristof, 1996). Direct measures of fit involve asking respondents explicitly for their perceptions of fit in their organization. Such measures are beneficial if the objective is to assess *perceived* fit. Indirect measures of fit, on the other hand, involve an explicit comparison between separate assessments of respondent and organizational characteristics. These measures are used to assess *actual* fit (Kristof, 1996). Direct measures of fit have been found to be stronger than indirect measures. They have also been found to be better predictors of employee outcomes (e.g., Bright, 2007). Accordingly, direct measures were used in the current study to assess the value fit between employees and their organization. We used three high-loading items from Cable and Judge's (1996) measure of P-O fit. A typical item is "My personal values "match" or fit exactly the values that my organization considers important". This scale had an internal consistency reliability of .82.

3.6.4 Burnout

Items linked to the two dimensions of burnout are taken from the MBI-HSS (Maslach & Jackson, 1996). Five items each were used to assess emotional exhaustion and depersonalization. A sample item for emotional exhaustion is "I feel burned out from my work". Internal consistency reliability was .91. A sample item for depersonalization is "I feel little enthusiasm for the work that I do". Internal consistency reliability was .87.

3.7 Analysis

To test our hypotheses we conducted structural equation modeling (SEM) in Mplus version 6.0 (Muthen & Muthen, 1998 – 2010) with Maximum Likelihood (ML) estimation. Mplus produces measures of overall model fit, generates estimates of the hypothesized relationships (unstandardized and standardized coefficients, standard errors and t-tests), calculates total effects, and provides measures of the proportions of variance explained. The goodness of fit of the SEM models was evaluated based on a range of fit indices including the χ^2 value, the Root Means Square Error of Approximation (RMSEA), the Standardised Root Means Square Residuals (SRMR), the Comparative Fit Index (CFI), and the Tucker Lewis Index (TLI). Levels of 0.90 or higher for TLI and CFI and levels of 0.06 or lower for RMSEA, combined with levels of 0.08 or lower for SRMR, indicates that models fit the data reasonably well (Arbuckle, 2003). In order to confirm the four factor structure (HIWPs, P-O fit, emotional exhaustion and depersonalization) for the measurement model, a confirmatory factor analysis using latent variables was carried out in the first step. The theoretical model with structural paths was tested in the second step. The latent exogenous variables P-O fit and endogenous variable burnout was operationalized by one and two variables respectively. HIWPs were treated as a second order latent factor. In order to test the mediating role of P-O fit in the HIWPs-burnout relationship, the following conditions must be satisfied according to

MacKinnon, Fairchild, and Fritz (2007): (1) the independent variable (HIWPs) has a significant effect on the mediating variable (P-O fit); and (2) the mediating variable (P-O fit) has a significant effect on the dependent variable in a regression of the independent and mediating variable on the dependent variable. Full mediation occurs if there is no effect of the independent variable on the dependent variable (in addition to the mediating variable). Partial mediation occurs if the independent variable does have a significant effect on the dependent variable in addition to the mediating variables. Although the often cited mediation rules by Baron and Kenny (1986) argued that for a mediating effect to exist, the independent and the dependent variable should correlate, recent research argues that this condition is not necessary, as suppressor effects may occur (MacKinnon et al., 2007). To test the mediating hypothesis, we compared the fit of a fully mediated model and a partially mediated model which included direct and indirect paths. In addition, the increasingly popular method of bootstrapping was used to test the significance of the indirect effect (Shrout & Bolger, 2002).

3.8 *Results*

3.8.1 Descriptive statistics

Table 3.1 presents the means, standard deviations, correlations and the internal consistencies of the scales included in this study. Demographic variables (e.g., position, tenure) were not statistically related to the dependent variables within the model (i.e. exhaustion and depersonalization) and were therefore omitted from further analysis to avoid misinterpretation of the results (Spector & Brannick, 2011).

Table 3.1: Means, standard deviations, reliability coefficients and correlations.

	Mean	SD	1	2	3	4	5	6	7
1. Empowerment	5.69	1.23	(.90)						
2. Information	3.93	1.29	.287**	(.92)					
3. Reward	3.40	1.47	.205**	.633**	(.90)				
4.Training	4.20	1.36	.288**	.508**	.564**	(.80)			
5. PO-fit	4.56	1.21	.297**	.563**	.511**	.512**	(.82)		
6. Exhaustion	3.36	1.49	-.111**	-.237**	-.210**	-.154*	-.302**	(.91)	
7. Depersonalization	2.83	1.31	-.172*	-.232**	-.186*	-.167*	-.322**	.778**	(.87)

Note: * p<.05; ** <.01; ***p<.001

3.8.2 Measurement Models

According to Anderson and Gerbing's (1988) recommendations, it is necessary to assess the appropriate factor structure of the measures used in the current study prior to testing the structural model. We used the aforementioned fit indices in examining the distinctiveness of our study variables. Our overall hypothesised CFA model including four factors yielded a good fit to the data (χ2 (342) = 616.885 p < .001, CFI = .925, TLI = .917, RMSEA = .066, SRMR= .058). That model yielded a better fit to the data than any more parsimonious model, including a three factor model by combining burnout as well as a one factor model (see table 3.2). Models were compared using the chi-square difference test (Bentler & Bonett, 1980). As the data was collected using self-reported measures, findings could be affected by common method bias. To test for this issue we computed a confirmatory factor analysis for the four latent variables with and without a same-source first-order factor added test. This unmeasured latent method factor was set to have indicators of all self-report items, therefore controlling for the portion of variance attributable to obtaining all measures from a single

source (see Podsakoff, Mackenzie, & Podsakoff, 2012). As all factor loadings and intercorrelations were almost identical in both models, common method variance was not believed to be a source of bias in this study's data.

TABLE 3.2: *Confirmatory Factor Analysis of Measurement Models: Fit Indices*

Model	χ^2	***df***	$\Delta\ \chi 2$	**CFI**	**TLI**	**RMSEA**	**SRMR**
1. Hypothesised Four Factor Model	616.294	340	-	.925	.916	.066	.058
2. Three Factor Model: **Burnout**							
Combining emotional exhaustion and depersonalization	667.042	343	50.748***	.912	.903	.071	.059
3. One Factor Model	9629.896	464	9629.896***	.195	.140	.327	.191

N=185; χ^2 = Chi-square discrepancy, df = degrees of freedom; $\Delta\ \chi 2$= difference in chi-square; CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean-Square Error of Approximation; SRMR = Standardized Root Mean Square Residual.

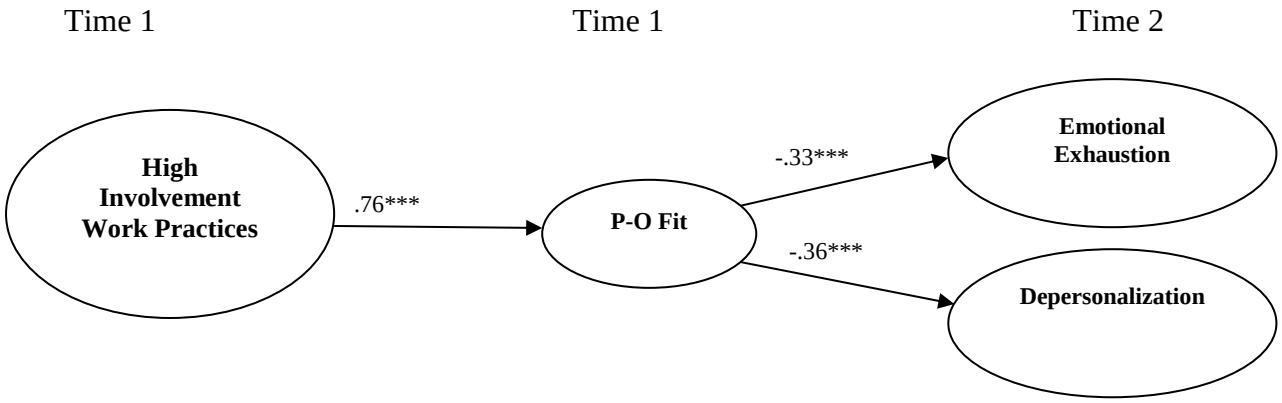
***p < .001

3.8.3 Structural Model and Hypothesis Testing

Hypothesis 1 proposed that positive perceptions of HIWPs would be positively related to P-O fit. There was a significant positive relationship (β = .768, p < .001) thus supporting Hypothesis 1. Hypothesis 2 proposed that P-O fit would be significantly negatively related to (a) emotional exhaustion and (b) depersonalization. These relationships were indeed significantly negatively related for emotional exhaustion (β = -.331, p < .001) and depersonalization (β = -.363, p < .001). Hypotheses 2a-b are thus supported. Hypotheses 3a-b stated that P-O fit would mediate the relationship between HIWPs and the two dimensions of burnout. This was tested by comparing a fully indirect and direct structural model. The SEM model which specified full mediation of HIWPs on burnout through P-O fit provided a good fit to the data, (χ2 (342) = 616.885, p < .001, CFI = .925, TLI = .917, RMSEA = .066, SRMR= .058). In the second model, P-O fit was hypothesised to partially mediate the associations between HIWPs and burnout; that is to say, the model was specified to include direct associations between HIWPs and burnout as well as indirect associations via P-O fit. The fit statistics for the partially mediated model were as follows (χ2 (340) = 616.294, p < .001, CFI = .925, TLI = .916, RMSEA = .066, SRMR = .058). The models were quite similar and they were compared using the chi-square difference test. Results indicated that there was no significant difference between the partial and fully mediated model. However the fully mediated model was the more parsimonious model and therefore the hypotheses were analysed using this model. Overall, HIWPs impacted emotional exhaustion via P-O fit (β = -.254, p < .001) and depersonalization via P-O fit (β = -.279, p < .001). In other words P-O fit fully mediated the relationship between HIWPs and burnout. Bootstrapping analysis with 1000 bootstrap samples further confirmed the significance of the indirect effect of P-O fit between HIWPs and emotional exhaustion with an estimated indirect effect αβ of P-O fit on change in exhaustion of -.254. The significance of the indirect effect of P-O fit between

HIWPs and depersonalization was also confirmed with an estimated indirect effect αβ of P-O fit on change in depersonalization of -.279. As the 95% bias-corrected confidence interval did not contain zero for emotional exhaustion (95% CI - .426 – - 0.83) and depersonalization (95% CI -.463 – - 0.95), full mediation was supported.

Figure 3.2: Model Results



3.9 Discussion

The findings demonstrate that perceived HIWPs are associated with increased P-O fit. P-O fit is negatively associated with long term burnout. Finally, the relationship between perceived HIWPs and burnout is fully mediated through P-O fit. These findings have important implications for both theory and practice. Below, we discuss these implications along with new directions for research.

3.10 Theoretical Implications

This study contributes to knowledge in several ways. First, it is one of few studies that investigate the HIWPs and P-O fit relationship in the health care context. Confirming the recent findings of Boon et al. (2011), our results suggest that perceptions of HIWPs have an important role in enhancing employees' person-organization value congruence (P-O fit). Boon and colleagues (2011) premise their argument on the ASA framework (Schneider, 1987) whereby HR practices have a prominent role in attracting, selecting and retaining employees. However, the authors have called for future research to examine the role of other HR practices that go beyond selection and their potential role in increasing P-O fit (e.g., Boon et al., 2011). We adopted a set of HIWPs associated with the PIRK model of Lawler (1986) and argue based on the ASA framework (Schneider, 1987) and COR theory (Hobfoll, 1989), that perceptions of these practices can increase P-O fit among health care employees. Consistent with the ASA framework, hospitals are likely to select and attract employees who have similar values to their institution while employees who fit with these values will be more likely to retain membership. However, there may be other explanations for illustrating how HIWPs can increase P-O fit. For example, a novel approach is proposed by Wheeler et al. (2013) who consider COR theory as a middle range theory in understanding P-O fit which is important for this study as it does not negate the inclusion of other theoretical approaches.

The authors posited that the organization based resource of HRM develops the organization-bound resource of P-O fit. In their view, HR practices signals that important P-O fit resources are available for employees which enable them to better cope in their work environment. More specifically, organizational practices (e.g. HIWPs) are aspects of a resource caravan which create passageways for supplying, protecting, sharing, fostering and pooling (P-O fit) resources (Hobfoll, 2011). Therefore HIWPs may be viewed as resources that increase other resources relevant to experiencing high levels of P-O fit (e.g., Empowerment) and play a role in protecting against the threat or actual resource loss of P-O fit. As previously mentioned, magnet status hospitals espouse values indicative of HIWPs and these hospitals are seen as an 'employer of choice' by health care professionals. This stream of research shows that HIWPs are valued by hospitals because they promote humanistic values and it demonstrates that they care for the well-being of employees (e.g., Harmon et al., 2003; Rondeau & Wagar, 2006). Hospitals are also likely to value and adopt HIWPs given that they are known to improve hospital performance outcomes such as the quality of patient care (Avgar et al., 2011; Harmon et al., 2003).Therefore, to the extent that hospitals value and adopt HIWPs and these are valued by health care employees, positive perceptions of such are likely to ensure P-O fit. The second contribution of this study is the examination of the relationship between perceptions of HIWPs and burnout. This examination sheds further light on the nature of balance in terms of whether HIWPs have a positive or negative influence on health-related outcomes for employees (e.g., Kroon et al., 2009; Van de Voorde et al., 2012; Wood & de Menezes, 2011). More pointedly, this responds to the call from Harley et al. (2007) to elucidate on whether HIWPs have a positive or negative influence on employees' experience of work in the health care context. The results indicated that perceived HIWPs do not impact long term burnout directly as was found in previous studies which used a cross-sectional research design (e.g., Castanheira & Chambel, 2010; Sun & Pan, 2008). The results however

are more consistent with Vanhala and Tuomi (2006) who used a predictive design and found that the majority of HR practices did not directly impact the emotional exhaustion component of burnout. These authors acknowledged that the link from HRM to burnout is too distal thus necessitating the inclusion of mediating variables. The third contribution of our study is that it investigates an important underlying mechanism which mediates this link. We noted earlier that one important mediating mechanism explaining how HIWPs can reduce long term burnout is P-O fit. This study therefore contributes to knowledge by bringing various aspects of P-O fit, COR and HR theory together in a single explanatory model (Boon et al., 2011; Wheeler et al., 2013). In doing so we respond to calls from researchers to further elucidate on the 'black box' of intervening mechanisms that explain how HIWPs impact burnout (Castanheira & Chambel, 2010). This is an important issue as a number of authors have noted there has been a major lack of theorizing in terms of explaining the relationship between HIWPs and well-being outcomes (e.g., Wood et al., 2012). On a broad level, the results are positive given that HIWPs have beneficial effects for employee's burnout. Although contrary to previous studies, there are a number of underlying dynamics which work in tandem to make this relationship happen. From a COR theoretical standpoint, it is important to note that cross-sectional studies can often fail to capture the reality of what is happening in processes governed by COR and therefore some authors believe that a time lagged research design is necessary (Halbesleben et al., 2014). Utilising a time lagged research design with a three year interval allows for testing the effect of HIWPs and P-O fit on an outcome that develops over time, i.e. burnout. However, it is important to note that in the broader literature, little consensus exists about the correct length of time lags (Dormann & Zapf, 1996). Although not tested empirically, the results would seem to lean towards a mutual gains (win-win) approach rather than a conflicting outcomes (win-lose) perspective advocated by the labour process perspective (Ramsay, Scholarios, & Harley, 2000). The results in this study's context

therefore contradict the ‘exploitation hypothesis’ that HR increases burnout as was proposed and confirmed by Kroon et al. (2009). The final contribution of this study is the examination of the relationship between P-O fit and long term burnout. The findings reveal that P-O fit has an important role in the reduction of burnout. While P-O fit has been linked to many positive outcomes for organizations (e.g., Kristoff-Brown et al., 2005), its impact on burnout has received scant research attention. This study introduces the rarely applied COR theory to explain this relationship. In this sense if employees fail to mitigate resource loss (e.g., that occurs as a result of P-O misfit), the resource drain inevitably leads to burnout (Wheeler et al., 2013). Conversely if employees have the resources indicative of P-O fit, any surplus resources can be invested into the work environment to alleviate burnout. The finding that P-O fit reduces burnout is also consistent with Maslach and Leiter’s (1997) model which focuses on the degree of match, or mismatch, between the person and six situational factors in the work environment; workload, control, reward, community, fairness and values. It is believed that a mismatch occurs in values when the organization makes choices that are inconsistent with their core values and their staff member’s values (Siegall & MacDonald, 2004). Therefore this study adds support to the empirical study of Siegall and McDonald (2004) who found that P-O fit was strongly and negatively related to burnout among university professors. This present study extends these results to the health care sector and addresses the acknowledged methodological shortcomings of Siegall and McDonald (2004) to the extent that this study uses a time lagged research design.

3.11 Limitations and Future Directions

This study has a number of limitations. First, the sample was composed of employees from a single organization (i.e. Canadian hospital). Thus, replicating the present study using different samples of employees in different contexts and countries would be highly advantageous in future research. Although this study is restricted in terms of common method bias, self-report methods represent the only direct and valid method of gathering information about individual perceptions in the workplace (Chan, 2009). Moreover, authors have highlighted that reactions to HR practices as experienced by employees themselves is the appropriate level of measurement for assessing implemented HIWPs as opposed to intended HIWPs and this overcomes measurement error caused by relying on one organisational representative such as a HR Manager (Heavey, Beijer, Federman, Hermansky, & Klein, 2013). Nevertheless we used statistical procedures to test for its effects and found that common method bias was not a problem in this study's data. This study tested mediation using a time lagged research design. This design is a particular strength of this study given the scarcity of time lagged and longitudinal research in HRM (Van de Voorde et al., 2012). However, three waves of data collection would provide a way to evaluate nonlinear relations (i.e. reverse causation) rather than only a linear relation with two waves of data collection (Cole & Maxwell, 2003). While our study finds a mediating effect of P-O fit in this relationship, it is likely that other factors could also represent important mediators. We encourage authors to further unlock the 'black box' by investigating additional intervening mechanisms and boundary conditions of the HIWPs and broader well-being link (e.g., Peccei et al., 2013).

3.12 Implications for Practitioners

Our study has a number of practical implications for managers in health care organisations. Consistent with the predictions of COR theory, our results demonstrate that positive perceptions of HIWPs are related to higher levels of P-O fit and lower levels of burnout. From a policy and practice perspective this is important given that burnout is particularly acute among health care professionals (e.g., Maslach et al., 2001) and has been directly related to the quality of care across a wide range of countries (e.g., Poghosyan, Clarke, Finlayson, & Aiken, 2010). A perpetual problem for HR managers is making a case for increased investment in HR. Therefore, the HR function could use these findings to build a case for investing in HIWPs in order to overcome the persistent problem of burnout. A primary feature of some of the best hospitals, also called magnet status hospitals, is their adoption of HIWPs (Rondeau & Wagar, 2006). The HR function therefore needs to ensure they promote the use of HIWPs similar to magnet hospitals. This could also ensure that health care organizations become an 'employer of choice' and therefore assist in addressing the struggle to attract and retain health care personnel (Aiken et al., 2002). As line managers are charged with the responsibility of implementing HRM, their support will likely enhance or hinder any positive perceptions of the HIWPs that employees may have (Hutchinson & Purcell, 2010). As a whole, it seems that HIWPs represent a positive resource for employees', which improves health related outcomes. However, managers need to be aware that it may take some time for these practices to take effect as they are dependent on enhancing employees' P-O fit.

Chapter Four
Nurses Perceptions of High Involvement Work Practices and Burnout: The Role of Procedural Justice, Role Overload and Colleague Support

Abstract

This study examines the impact of employees' perceptions of high involvement work practices (HIWPs) on burnout (emotional exhaustion and depersonalisation) via the mediating role of demands (role overload) and resources (procedural justice). Furthermore, perceived colleague support was hypothesised to moderate the effects of role overload and procedural justice on these outcomes. Data from 2,174 nurses in Canadian hospitals was analysed using structural equation modelling (SEM). The results showed that procedural justice and role overload fully mediated the influence of HIWPs on burnout. Moreover, colleague support moderated the effects of procedural justice and role overload on emotional exhaustion but not depersonalisation. Overall, the study contributes to the research on the underlying mechanisms of how HIWPs influence burnout and the conditions under which these underlying mechanisms can be enhanced or undermined.

4.1 Introduction

Burnout describes a state of mental weariness (Schaufeli & Bakker, 2004), and has been portrayed as a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment that can occur among people who are working in emotionally demanding roles (Demerouti et al., 2002). Exhaustion (a state when one is emotionally, physically, and cognitively drained at work) and depersonalisation (when one develops an indifferent or distant attitude toward work) are the two core symptoms of burnout (Shirom, 2010). Nursing is an occupation subject to extremely high levels of burnout (Aiken et al., 2002). This is largely due to high patient-to-staff ratios and excessive workload which is exacerbated by high levels of turnover (e.g. Aiken et al., 2002). As a result of the persistent problem of burnout in modern society, leading scholars on the subject have called for studies that investigate interventions to alleviate its occurrence (e.g. Shirom, 2010). Such interventions may be particularly worthwhile in the health care context as previous research has shown that burnout is directly linked to the quality of patient care delivered (e.g. Wood & Killion, 2007). One organisational intervention believed to be important for reducing burnout is the adoption of high involvement work practices (Castanheira & Chambel, 2010). However, very few studies have actually examined the role of HR practices in general as a solution to the challenges confronting health care organisations including the declining nature of staff well-being (e.g. Baptiste, 2008). However, in the wider human resource management (HRM) literature, debate is on-going regarding the extent to which HR practices have positive or negative effects on employee well-being (Van de Voorde et al., 2012). At the same time, the theoretical and empirical mechanisms' through which HIWPs transmit their effects on employee well-being outcomes are still at an embryonic stage (e.g. Butts et al., 2009; Van de Voorde et al., 2012). Motivated to fill this void, various theoretical approaches have recently been postulated (for an overview, see Peccei et al., 2013) while more empirical research is

also being carried out (Castanheira & Chambel, 2010; Mackie et al., 2001; Jensen et al., 2013). Job demands and resources represent a promising direction for future research in explaining the relationship between HIWPs and employee well-being outcomes in general (Peccei et al., 2013) and burnout in particular (Castanheira & Chambel, 2010). Kroon and colleagues (2009) investigated the role of a resource (procedural justice) and a demand (psychosocial job conditions) as mediators in the link between HPWP and burnout. However, given the authors' non-significant findings regarding the impact of HPWP on procedural justice, they called for research to investigate this relationship further by considering procedural justice from managers as the target of investigation. The rationale underpinning this suggestion is that managers are the ones who are ultimately responsible for implementing HR practices (Wu & Chaturvedi, 2009). In addition, in order to further investigate whether job demands and resources simultaneously mediate the HIWPs-burnout relationship, we note that role overload is arguably the most common demand faced by nurses (Le Blanc, Hox, Peeters & Taris, 2007; Felton, 1998) and, therefore, may be more appropriate to study in this context. Building on these ideas, we propose that the job demand of role overload and the job resource of procedural justice from managers could represent key intermediary mechanisms through which HIWPs exert their influence on a critical well-being outcome, that is, burnout. However, it is plausible to suggest that the intermediate outcomes of HIWPs (role overload and procedural justice) could also be influenced by the informal and social aspects of the organisation that can promote or inhibit its success (e.g. Butts et al., 2009). Therefore, beyond the role of organisational intervention in the form of HIWPs, we consider the wider social context of work by investigating the importance of colleague support in terms of the success or failure of HIWPs.

Our study contributes to the literature in HRM and occupational health psychology in a number of ways. First, it contributes to the literature in HRM by providing insight into the

extent to which HIWPs bear positive or negative consequences for employee burnout (Kroon et al., 2009; Vanhala & Tuomi, 2006; Wood & de Menezes, 2011). Second, it responds to calls from researchers to engage in further research to expose how HIWPs can influence well-being outcomes (Castanheira & Chambel, 2010; Harris et al., 2007). More generally, the present study adopts an important and well known theory from the occupational health psychology field (i.e. Conservation of Resources Theory; COR) in order to investigate the proposed model, thus engaging in much needed theorising in the HIWPs-well-being link (Guest, 1997; Peccei et al., 2013). Third, in addition to testing the mediating effect of procedural justice and role overload, the present study investigates the moderating role of colleague support between these mediators and burnout. Therefore, it is possible to better understand the conditions under which these mediators work in terms of influencing burnout. Carrying out this investigation responds to calls from Butts and colleagues (2009) to further investigate the role of work support within the context of HIWPs and their effects on stress related outcomes. The final contribution of this study concerns the context within which the proposed model is tested. Investigating the impact of HIWPs on employee outcomes such as burnout in health care is critical given the desire of health care researchers to resolve the debate regarding whether HIWPs have beneficial or harmful consequences for employees (e.g. Harris et al., 2007; Harley et al., 2007). We also focus on the homogenous population of nurses, thus ruling out many other confounding factors such as occupational and job role differences. More pertinently, burnout is also a major problem for nurses', which has the potential to reduce the quality of care they deliver (Aiken et al., 2002; Felton, 1998; Le Blanc et al., 2007).

4.2 THEORETICAL BACKGROUND AND HYPOTHESES

Vandenberg et al. (1999) have developed a research framework of high involvement work practices based on Lawler's (1986) PIRK model which encompasses workplace power (P), information (I), rewards (R) and knowledge (K). The aims of such an approach to involvement are to empower workers to make more and better decisions, enhance the information and knowledge they need for this, and to reward them accordingly (Boxall & Macky, 2009). Many different configurations of HR systems have been used in previous research such as the high performance work systems and high commitment HR practices approach. However, the high involvement model forms the central tenet of this study given its theoretical and practical utility in the current context of workplace change aimed at flattening organisational structures (Boxall & Macky, 2009; Butts et al., 2009), as well as the desirability of involvement among nurses (Bartram et al., 2012; Rondeau & Wagar, 2006). Indeed, research demonstrates that magnet status hospitals, which are viewed as an 'employer of choice' by nurses, are more likely to adopt HIWPs (Rondeau & Wagar, 2006). The HIWPs adopted in this study are consistent with the PIRK model; empowerment (P), information sharing (I), non-monetary recognition (R) and development practices (K). These four components are included in most research on high involvement (Guerrero & Barraud-Didier, 2004). It is believed that these HIWPs cannot be implemented effectively in isolation but rely on a coherent package (Guerrero & Barraud-Didier, 2004) which according to Lawler (1986) has a synergistic and multiplicative effect. Indeed, employees must perceive high levels of all four attributes for an optimal employee involvement climate to exist (Riordan et al., 2005).

As previously mentioned, a major research gap concerns the lack of theoretical and empirical work dedicated to explaining the relationship between HIWPs and employee well-being outcomes. The present study adopts COR theory (Hobfoll, 1989) to better understand the impact of perceptions of HIWPs on burnout via job demands and resources. COR theory

is a motivational and stress theory which posits that when individuals' valued resources are threatened with loss or are actually lost, or when they fail to gain resources after substantive resource investment, they are vulnerable to burnout (Hobfoll, 2002). Specifically, according to the 'primacy of resources loss' principle, resource loss is more predictive of burnout than resource gain. However, according to the 'resource investment' principle, gains are not inconsequential and those with more resources at their disposal are less vulnerable to resources loss (Gorgievski & Hobfoll, 2008). From a COR theory perspective, HR practices have recently been proposed as critical resources for employees (Sun & Pan, 2008; Wheeler et al., 2012). Consistent with COR theory (Hobfoll, 1989) and previous research, procedural justice is also viewed as an important resource (Cole et al., 2010) while role overload is viewed as a major work demand (Lee & Ashforth, 1996) which depletes employees' resources. We argue that perception of HIWPs represents a source of support from which employees draw upon to gain additional resources and to meet the demands in their work environment (Bartram et al., 2012; Sun & Pan, 2008), which ameliorates their levels of burnout. Therefore, the effect of HIWPs on burnout occurs via a process of resource gain and protection. We now discuss the theoretical links in the proposed model.

4.3 HIWPs, Procedural Justice and Burnout

Procedural justice can be defined as the perceived fairness of the formal processes and policies through which decision outcomes are allocated and end products are achieved (Colquitt, Conlon, Wesson, Porter & Ng, 2001). Procedural justice has been linked to a wide range of positive attitudes and behaviours (see Robbins, Tetrick & Ford, 2012 for a review). However, its effect on health outcomes has received much less research investigation. Consistent with COR theory (Hobfoll, 1989), individuals perceive just acts to be gestures of good will from the organisation or its agents, and as such, contribute to the replenishment of

their socio-emotional resources (Cole et al., 2010). As noted by Leventhal (1976), procedural fairness (procedural justice) ensures more predictability and promise of access to future resources. In contrast, an absence of procedural justice should induce insecurity about the availability of important resources and may even signify a lack of resources (Judge & Colquitt, 2004). In accordance with COR theory, individuals' burnout should increase in this instance because valued resources have been lost or threatened as a result of unjust procedures (Cole et al., 2010). Supporting this logic, researchers have found procedural justice to be related to lower occupational strain (Elovainio, Helkama & Kivimaki, 2001) and burnout (Kroon et al., 2009; Noblet & Rodwell, 2008). In the human resource management field, research has found that perceptions of HIWPs are significantly and positively associated with procedural justice (Pare & Tremblay, 2007; Wu & Chaturvedi, 2009). As noted by Korsgaard and Roberson (1995), giving employees a "voice in decision procedures provides an indirect way to control or ensure a fair decision" (p.660). According to Thibaut and Walker (1975), people are more likely to appraise decisions as fair if the procedures followed give them some control or input into the decision making process. We note that a primary objective of HIWPs is to provide control and discretion to employees and enhance their overall decision making capacity (Wood et al., 2012). In this regard, consistent with COR theory, HIWPs are likely to represent a resource caravan passageway (conditions that enable other resources to develop) (Hobfoll, 2011) which allows for enhanced perceptions of procedural justice. Also, it could be the case that HR practices result in a resource 'gain spiral' meaning that resource gain in one domain influences resource gain in others (Hakanen et al., 2011). Despite the growing number of studies examining the relationship between HIWPs and employee attitudes via procedural justice (e.g. Pare & Tremblay, 2007; Wu & Chaturvedi, 2009), only one has considered this relationship with respect to burnout (Kroon et al., 2009). Kroon and colleagues failed to find a significant relationship between high

performance work practices and procedural justice, thus, they were not able to establish mediation. An explanation put forward by the authors relates to the fact that the source of procedural justice was related to the organisation rather than the supervisor. Indeed, authors have noted that it is line manager behaviour which is critical in order to understand whether employees feel that they are treated procedurally just (Colquitt et al., 2001; Kuvaas, 2008). Similarly, Wu and Chaturvedi (2009) argued that because individuals' perceptions of HR practices were considered in their study, fairness perceptions are most likely related to the immediate manager. After all, managers are responsible for implementing HR practices in organisations (Hutchinson & Purcell, 2010). Building on this notion, we consider fair processes and treatment by managers as a critical source of procedural justice. More pointedly, departing from previous research that considers HR managers' reports on HIWPs (Kroon et al., 2009), we assess perceptions of HIWPs from the employees' perspective thus gaining a more reliable estimate (Heavey et al., 2013; Kehoe & Wright, 2010). Formally stated, we propose the following hypotheses:

Hypothesis 1: Perceptions of HIWPs are significantly and positively related to procedural justice.

Hypothesis 2: Procedural justice is significantly and negatively related to burnout i.e. emotional exhaustion (H2a) and depersonalisation (H2b).

Hypothesis 3: Procedural justice will mediate the relationship between HIWPs and burnout i.e. emotional exhaustion (H3a) and depersonalisation (H3b).

4.4 HIWPs, Role Overload and Burnout

Role overload is experienced when the demands of one's work role exceed the resources available to meet them (Brown et al., 2005). Role overload is often considered as a challenge stressor in jobs where there are high job demands contingently linked to prospects for advancement and achievement (e.g. Cavanaugh et al., 2000). When employees experience role overload, they can often expand their efforts to cope with it (Le Pine et al., 2005). However, over time, role overload may drain individuals' resources (Schaufeli & Bakker, 2004) and function as a "hindrance stressor" (i.e., demands that constrain individuals' development and work accomplishment). Meta-analyses have shown a consistent positive correlation between overload and burnout (e.g. Lee & Ashforth, 1996). More directly relevant to the sample in this study, Greenglass et al. (2001) found among nurses that role overload was positively related to burnout. Consistent with COR theory (Hobfoll, 1989), such exposure to overload requires employees to tap into their available resources thus resulting in resource depletion. The 'primacy of resource loss' principle demonstrates that when these resources are threatened or lost and employees are unable to cope, they are prone to experiencing burnout (Stordeur et al., 2001). Job demands are perceived as losses because "meeting such demands requires an investment of valued resources" (Lee & Ashforth, 1996, p. 129). In other words, attempting to cope with job demands and protect one's resources, other resources have to be invested (e.g. spending more time and working harder) which carries the risk of burnout (e.g. Schaufeli et al., 2009). Research in the area of HRM demonstrates that HIWPs can be either positively or negatively related to employees job demands. The labour process theory (Braverman, 1974) or conflicting outcomes perspective argues that HIWPs intensify employees' job demands and increase their burnout (Wood et al., 2012; Kroon et al., 2009).

In contrast, the 'mainstream' perspective posits that HIWPs are likely to alleviate job demands thus lowering their levels of burnout (Castanheira & Chambel, 2010; Wood & de Menezes, 2011). Consistent with the value that health care employees place on high involvement (Rondeau & Wagar, 2006), along with the instrumentality it affords them in terms of dealing with their job demands (Bartram et al., 2012), we adopt a positive perspective regarding the influence of HIWPs. Sun and Pan (2008) argued that it is the responsibility of organisations to provide employees with adequate HR resources to meet their job demands. HIWPs are aimed at providing increased decision latitude for employees, thus allowing them to adjust to their demands according to their needs and circumstances (Castanheira & Chambel, 2010). They also improve workers' capacity to deal with tasks because they can think of better ways of doing their jobs and react better to novel problems (Wood et al., 2012), mainly because the time and opportunity exist to discuss difficulties and share solutions (Castanheira & Chambel, 2010). As a result, employees are less likely to expend their valued resources thus reducing their workload. In accordance with the 'resource investment' principle inherent to COR theory, resources (i.e. HIWPs) compensate for certain losses (i.e. resources invested to meet job demands) and indirectly help workers cope with burnout (Lee & Ashforth, 1996; Sun & Pan, 2008). Therefore, in addition to the direct effect of HIWPs on role overload, and the direct effect of role overload on burnout, it is plausible to suggest that role overload could represent a key underlying mechanism through which HIWPs alleviates burnout. Formally stated, we predict the following hypotheses:

Hypothesis 4: Perceptions of HIWPs are significantly and negatively related to role overload.

Hypothesis 5: Role overload is significantly and positively related to burnout i.e. emotional exhaustion (H5a) and depersonalisation (H5b).

Hypothesis 6: Role overload will mediate the relationship between HIWPs and burnout i.e. emotional exhaustion (H6a) and depersonalisation (H6b).

4.5 Moderating Role of Colleague Support

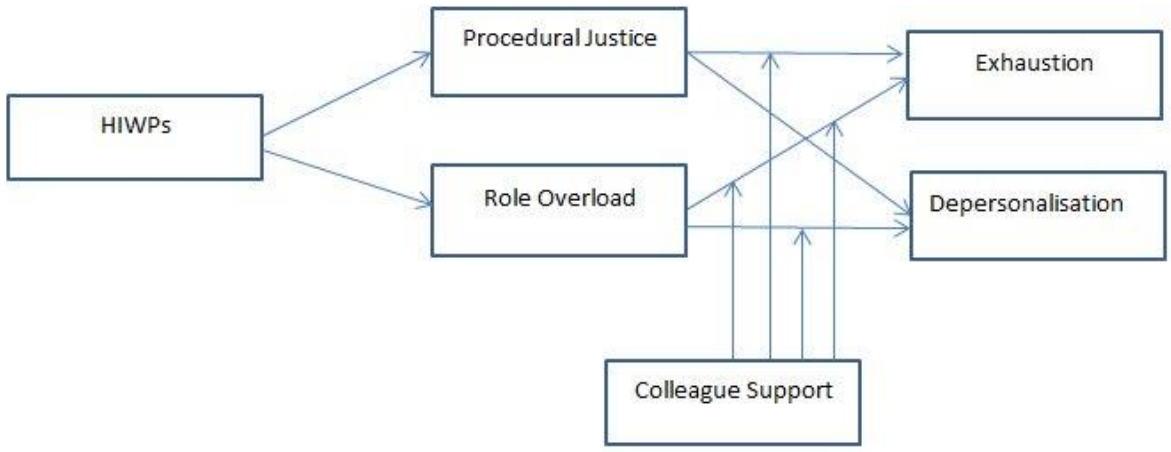
Despite the importance of understanding the mediating factors governing the HIWPs and burnout link, it is possible that broader social factors may impact the outcomes of HIWPs. Specifically, this study proposes that colleague support represents another resource which amplifies the effect of procedural justice on burnout and buffers the effect of role overload on burnout. Social support is an interpersonal transaction that involves emotional concern, instrumental aid, information, or appraisal (House, 1981). In the work context, social support can stem from a number of sources including supervisors or colleagues, and these forms of support are believed to create a more positive work environment for employees (Carlson & Perrewe, 1999). We focus on colleague support which is seen as an important source of support for nurses (e.g. Freeney & Fellenz, 2013; Le Blanc et al., 2007). Indeed, nurses are required to work closely and cooperatively with each other as their tasks are highly interdependent (e.g. Gittell et al., 2010) and they frequently engage in supportive behaviours towards one another in order to cope with burnout (Gilbert et al., 2010). Previous research has highlighted the prominent role of colleague support in reducing burnout and this is often

explained using COR theory (e.g. Halbesleben, 2006). Organisational attempts to construct a positive work environment may also depend on the support received from colleagues as they represent another valuable resource, which can be leveraged by employees. Employees may frequently utilise the discretion and control afforded by HIWPs to seek socio-emotional and instrumental support from colleagues. Resources from the organisation in the form of HIWPs and procedural justice from managers is likely to be important, although support from colleagues is likely to matter just as much, or perhaps more, as they are often closer to the source of stress (Spooner-Lane, 2004; Terry & Callan, 2000). Such social support from colleagues is believed to be crucial in the adaptation of the care provider to the care of patients (Le Blanc et al., 2007). Therefore, the positive relationship between role overload and burnout is likely to weaken under conditions of high colleague support as support of this kind broadens one's pool of available resources, which can be instrumental in dealing with stressful demands (Halbesleben, 2006). Similarly, the negative relationship between procedural justice and burnout is likely to be stronger under conditions of high colleague support because gaining resources (e.g. fair procedures) increases the resource pool, which makes it more likely that additional resources (e.g. colleague support) will be gained (Salanova, Schaufeli, Xanthopoulou & Bakker, 2010). This is consistent with the notion of a 'resource caravan' or resource 'gain spiral' which posits that resource gain in one aspect of the work environment is likely to strengthen other forms of resources (Hobfoll, 2002). Similar to the above, it is also possible that because coworkers have such a critical role in nurses' daily work environment, colleague support can often compensate for unfairness directed from managers (procedural injustice) to employees. Therefore, we put forward the following hypotheses:

Hypothesis 7: Colleague support moderates the relationship between procedural justice and burnout comprised of (H7a) emotional exhaustion and (H7b) depersonalisation such that the relationship will be stronger under high rather than low levels of colleague support.

Hypothesis 8: Colleague support moderates the relationship between role overload and burnout comprised of (a) emotional exhaustion and (b) depersonalisation such that the relationship will be stronger under high rather than low levels of colleague support.

Figure 4.1: Conceptual Model



4.6 Methodology

4.6.1 Participants

The study was conducted on a random sample of unionised registered nurses (RNs) working in the Canadian public health care sector, stratified by mission and size of the institution to ensure representativeness. Of the 6,546 nurses solicited, 2,174 returned a completed questionnaire, resulting in a response rate of 33.2%. Although this response is relatively small, this is comparable to other occupational stress research conducted among nurses (e.g. Jenkins & Elliot, 2004; Stordeur et al., 2001). 92.2 % of this sample were females, with an average age of 41 and with an average tenure of about 15 years. The vast majority (50.3%) held a college diploma while 33.3% held a bachelor's degree. The limited information available indicates that respondents do not differ from the overall population in terms of gender, age, education and seniority.

4.6.2 Measures

Unless otherwise specified, all constructs were measured on a Likert scale ranging from Strongly Disagree (1) to Strongly Agree (7).

4.6.3 High Involvement Work Practices

Empowerment, information sharing, rewards and development practices are the core high involvement practices and have been included in most research (Guerrero & Barraud-Didier, 2004). The measure for empowerment was adopted from the psychological empowerment scale by Spreitzer (1995). Specifically three items were used from the autonomy subscale. A sample item is "I can decide on my own how I go about doing my work". Internal consistency reliability was .83. To measure information sharing five items were adopted from Lawler, Mohrman and Ledford (1995). A sample item is "The organization usually asks for

employees' opinion when it considers adopting new rules, procedures or methods related to the organization of work". Internal consistency reliability was .92. To measure non-monetary recognition, four items were adopted from Tremblay et al. (2000). A sample item is "exceptional contributions of employees are formally recognised by the organization "e.g. during ceremonies or meetings, through the organizations newsletter, by congratulatory letters, with gifts). Internal consistency reliability was .95. The measure for development practices was adopted from Tremblay et al. (2000). Specifically, three items assessed the level of training and development that employees were exposed to. A sample item is "In our organization, we have access to the resources needed to improve our skills". Internal consistency reliability was .83. Previous research has demonstrated that HIWPs are treated as a second order latent factor and have more impact when bundled together (e.g. Vandenberg et al., 1999). Therefore, HIWPs were treated as a second order latent factor in this study.

4.6.4 Role Overload

We used three items from the quantitative overload scale developed by Caplan et al. (1980). A typical item is "I regularly feel overloaded by my work". Internal consistency reliability was .76.

4.6.5 Procedural Justice

We measured procedural justice from the measure developed by Niehoff and Moorman (1993). A typical item is "The managers make sure that all employees concerns are heard before making decisions". Internal consistency reliability was .74.

4.6.6 Colleague Support

To measure colleague support, we adapted three items from Eisenberger, Stinglhamber, Vandenberghe, Sucharski, and Rhoades (2002), Perceived Organizational Support (POS) scale. Specifically, we replaced the word organisation with colleague. A sample item reads now "I know I can count on my colleagues if I have a problem". Internal consistency was .86.

4.6.7 Burnout

The measures for the two dimensions of burnout are taken from the MBI-HSS (Maslach & Jackson, 1996). Four items each were used to assess the two core dimensions of burnout i.e. emotional exhaustion and depersonalisation. A sample item for emotional exhaustion is "I feel burned out from my work". Employees were asked on a 7 point scale from never (1) to daily (7) how frequently these statements corresponded to their situation in the last 12 months. Internal consistency reliability of the emotional exhaustion scale was .88. A sample item for depersonalisation is "I feel little enthusiasm for the work that I do". Internal consistency reliability of the depersonalisation scale was .70.

4.6.8 Control variables

Given their importance in predicting burnout, previous research has controlled for the effects of age, education, gender, contract type, marital status and tenure in investigating the relationship between HR practices and burnout (Kroon et al., 2009; Sun & Pan, 2008). On this basis, we controlled for the possible effects of age, education, gender, contract status, civil status and tenure.

4.6.9 Levels of Analysis

Although all survey items were collected at the individual level of analysis, we employed aggregation techniques in order to assess the extent to which a multilevel model exists given that a large number of hospitals were sampled for this study.

Aggregating individual data to the organisational mean requires within-unit agreement and between-unit differences (e.g. Klein, Conn, Smith & Sorra, 2001). To investigate the extent to which individual scores could be aggregated to organisational level scores, we calculated the ICC(1) (which represents the percentage of members' variance attributable to organisational membership) and ICC(2) (which indicates the reliability index of mean scores). Based on the low score reported for the ICC(1) and ICC(2) for the dependent variable burnout, the model was run at the individual level of analysis as there were no differences in burnout that could be explained by the hospital that nurses were working in (results available on request).

4.7 Analysis

To test our hypotheses, we conducted structural equation modelling (SEM) in Mplus version 6.0 (Muthen & Muthen, 1998 – 2010) with Maximum Likelihood (ML) estimation. Mplus produces measures of overall model fit, generates estimates of the hypothesised relationships (unstandardised and standardised coefficients, standard errors and t-tests), calculates total effects, and provides measures of the proportions of variance explained. The goodness of fit of the SEM models was evaluated based on a range of fit indices including the χ^2 value, the Root Means Square Error of Approximation (RMSEA), the Standardised Root Means Square Residuals (SRMR), the Comparative Fit Index (CFI), and the Tucker Lewis Index (TLI). Levels of 0.90 or higher for TLI and CFI and levels of 0.06 or lower for RMSEA, combined with levels of 0.08 or lower for SRMR, indicates that models fit the data reasonably well

(Arbuckle, 2003). In order to confirm the five factor structure (HIWPs, procedural justice, role overload, emotional exhaustion and depersonalisation) for the measurement model, a confirmatory factor analysis using latent variables was carried out in the first step. The theoretical model with structural paths was tested in the second step. The latent exogenous variables which are representative of job demands and resources and the endogenous variable burnout were operationalised by two variables respectively. HIWPs were treated as a second order latent factor. In order to test the mediating hypotheses, we compared the fit of a fully mediated model, a partially mediated model which included direct and indirect paths, as well as a direct-effects only model. In addition, bootstrapping was used to test the significance of the indirect effect (Shrout & Bolger, 2002).

4.8 Results

4.8.1 Measurement Models

According to Anderson and Gerbing's (1988) recommendations, it is necessary to assess the appropriate factor structure of the measures used prior to testing the structural model. We used the aforementioned fit indices in examining the distinctiveness of our study variables. Our overall hypothesised CFA model including five factors yielded a good fit to the data ($\chi 2$ (363) = 2550.098 $p < .001$, CFI = .946, TLI = .939, RMSEA = .053, SRMR= .045). That model yielded a better fit to the data than any more parsimonious model, including a four factor model by combining the two dimensions of burnout as well as a one factor model (see Table 4.12). Models were compared using the Chi Square difference test (Bentler & Bonett, 1980). As all the data is based on self-reported measures, findings could be affected by common method bias. To test for this issue we computed a confirmatory factor analysis for the five latent variables with and without a same-source first-order factor added test. This unmeasured latent method factor was set to have indicators of all self-report items, therefore

controlling for the portion of variance attributable to obtaining all measures from a single source (see Podsakoff et al., 2012). As all factor loadings and intercorrelations were almost identical in both models, common method variance was not believed to be a source of bias in this study's data.

Table 4.1: Means, standard deviations, and correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender	.92	.26	-														
2. Education	1.86	.94	.98	-													
3. Job Status	1.82	1.02	.12*	-.11**	-												
4. Tenure	7.82	8.72	-.04	-.04	-.05*	-											
5. Civil Status	1.90	.49	.03	.03	-.05**	.00	-										
6. Age	41.6	10.74	-.01	.04*	-.19	.42**	.10**	-									
7. Empowerment	5.29	1.18	.01	.00	-.05**	.07**	-.01	-.07**	-								
8. Information	3.56	1.39	-.02	.06**	.04	.04	-.05*	-.01	-.06**	-							
9. Reward	3.24	1.60	.00	.04*	-.02	-.04*	-.05*	-.05**	.19**	.59**	-						
10. Training	3.83	1.49	-.00	.05*	-.00	-.02	-.04	-.04*	.26**	.65**	.50**	-					
11. Procedural Justice	3.63	1.37	.01	.08**	.00	-.05*	-.05*	-.01**	.31**	.60**	.42*	.43*	-				
12. Role Overload	4.67	1.40	.00	-.07**	.02	.01	-.01	-.02**	-.25**	-.26**	-.19**	-.22**	-.25**	-			
13. Colleague support	5.5	1.1	-.00	-.03	-.00	.01	-.02	-.06**	.33**	.23**	.20**	.15**	.24**	-.21**	-		
14. Exhaustion	3.74	1.36	.03	-.08**	.00	.03	.00	.00	-.25**	-.28**	-.21**	-.21**	-.25**	.59**	-.23**	-	
15. Depersonalisation	1.83	.89	-.04*	-.06**	.01	-.02	-.01	-.05*	-.23**	-.20**	-.17**	-.14**	-.23**	.28**	-.18**	.41**	-

Note: * p<.05; ** <.01; ***p<.001

Table 4.2: *Comparison of Model Fit Indices*

Model	χ^2	***df***	Δ χ2	**CFI**	**TLI**	**RMSEA**	**SRMR**
Measurement Model							
1. Hypothesised Five Factor Model	2550.098	363	-	.946	.939	.053	.045
3. Four Factor Model: **Burnout**							
Combining exhaustion and depersonalisation	3590.934	367	1040.836 ***	.920	.911	.064	.054
4. One Factor Model	21227.036	377	18676.938***	.481	.441	.159	.133
Structural Model: Mediation Effects							
1. HIWPs Partial Mediation	3015.393	627	-	.941	.932	.042	.036
2. HIWPs Direct	3015.393	627	0	.941	.932	.042	.036
3. Fully Mediated Model	3020.805	629	5.4	.941	.932	.042	.037

N= 2,174; χ^2 = Chi-square discrepancy, df = degrees of freedom; Δ χ2= difference in chi-square; CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean-Square Error of Approximation; SRMR = Standardized Root Mean Square Residual.

4.8.2 Structural Model and Hypotheses Testing

The second stage of the data analysis involved testing the structural model. The overall structural model was tested by comparing the fit of a fully mediated model with a partially mediated model and a direct-effects only model (Kelloway, 1998). As shown in Table 4.2, the fully mediated model fitted the data quite well and this model was the most parsimonious model. The various direct-effects and partial mediation models were compared using the chi square difference tests (which were not significantly better than the fully mediated model), thus further indicating that the fully mediated model provided the best fit to the data. Therefore, the full mediated model formed the basis for analysing the hypotheses.

Hypothesis 1 proposed that employees' perceptions of HIWPs would be positively related to procedural justice. The results showed that HIWPs were indeed a significant predictor of procedural justice (β = .788, p < .001) thus supporting Hypothesis 1. Hypotheses 2a and 2b further predicted that procedural justice would be positively related to emotional exhaustion and depersonalisation. Procedural justice was a significant predictor of emotional exhaustion (β = -.126, p < .001) and depersonalisation (β = -.223, p < .001) thus supporting Hypotheses 2a and 2b. Hypotheses 3a and 3b proposed that procedural justice would mediate the relationship between HIWPs and burnout (emotional exhaustion and depersonalisation). Bootstrapping analysis with 1000 bootstrap samples confirmed the significance of the indirect effect of procedural justice between HIWPs and emotional exhaustion with an estimated indirect effect αβ of procedural justice on change in exhaustion of -.099. The significance of the indirect effect of procedural justice between HIWPs and depersonalization was also confirmed with an estimated indirect effect αβ of procedural justice on change in depersonalization of -.132. As the 95% bias-corrected confidence interval did not contain zero for emotional exhaustion [- .152, - .046] and depersonalization [-.244, - .108], mediation was supported. Overall, HIWPs had an indirect effect on emotional exhaustion (β = -.099, p <

.001), and depersonalisation (β = -.176, p < .001) through procedural justice. Hypothesis 4 proposed that positive perceptions of HIWPs would be negatively related to role overload. HIWPs were a significant predictor of role overload (β = -.453, p < .001) thus supporting hypothesis 4. Hypotheses 5a and 5b further predicted that overload would be positively related to emotional exhaustion and depersonalisation. Role overload was a significant predictor of emotional exhaustion (β = .699, p < .001) and depersonalisation (β = .296, p < .001) thus supporting hypotheses 5a and 5b. Hypotheses 6a and 6b proposed that role overload would mediate the relationship between HIWPs and burnout (emotional exhaustion and depersonalisation). Bootstrapping analysis with 1000 bootstrap samples confirmed the significance of the indirect effect of role overload between HIWPs and emotional exhaustion with an estimated indirect effect αβ of role overload on change in exhaustion of -.218. The significance of the indirect effect of role overload between HIWPs and depersonalization was also confirmed with an estimated indirect effect αβ of role overload on change in depersonalization of -.071. As the 95% bias-corrected confidence interval did not contain zero for emotional exhaustion [- .283, - .153] and depersonalization [-.136, - .057], mediation was supported. Overall, HIWPs have an indirect effect on emotional exhaustion (β = -.218, p < .01), and depersonalisation (β = -.096, p < .001) through role overload.

4.8.3 The Interactive Effects of Colleague Support

In order to test Hypotheses 7a-b and 8a-b, a moderated structural equation modelling (MSEM) analysis was carried out. The MSEM analysis found significant effects of the interaction terms, i.e. colleague support*procedural justice (β = - .037, p < .05) and colleague support*role overload (β = -.064, p < .01), on emotional exhaustion. To further examine the nature of the significant interaction effects, we plotted the interactions following the procedure outlined by Aiken and West (1991). Figure 4.3 shows that, as predicted, the

negative relationship between procedural justice and exhaustion was stronger when colleague support was high rather than low. Similarly, Figure 4.4 shows, as predicted, that the positive relationship between role overload and exhaustion was weaker when colleague support was high rather than low. Therefore, Hypotheses 7a and 8a were supported. The same set of relationships, however, were not statistically significant in regard to procedural justice and depersonalisation (β = - .006, p > .10) and role overload and depersonalisation (β = - .034, p > .10). Therefore Hypotheses 7b and 8b were not supported.

To further analyse the interaction effects the recommended procedure is to estimate the simple slopes (Aiken & West 1991) of each of the interaction effects using values of one standard deviation above the mean to represent high levels of colleague support, and one standard deviation below the mean to represent low values of colleague support (Cohen & Cohen 1983). However, the typical analysis of the simple slopes has to be adjusted in this more complex case in which the overall model includes two mediation and two moderation effects on two dependent variables.

The following procedure was followed to compare the effects of procedural justice and role overload on emotional exhaustion under two conditions of colleague support (high and low) (see Jenkins & Elliot, 2004 for a similar approach). The sample was split into two sub-samples, with one sub-sample including respondents who scored 1 SD over the mean of colleague support (all 396 respondents scoring higher than 6.66) and with one subsample including respondents who scored 1 SD below the mean of colleague support (all 355 respondents scoring lower than 4.42). On these two subsets the model without moderators was fitted to compare the subsets controlling the level of colleague support. The results provide insight into the moderating role of colleague support in the relation between procedural justice and emotional exhaustion in the following way. In the fully mediated model, the effect of procedural justice on exhaustion was as follows: β = - .09, p < .001, (see

also Figure 4.3). For the sub sample of respondents experiencing high colleague support, the results were (β = - .13, p < .001) while for the subsample of low colleague support the results were (β = - .04, p > .05). These results suggest that the negative relationship between procedural justice and exhaustion is stronger under conditions of high colleague support. However, in the absence of colleague support, the negative effect of procedural justice on exhaustion disappears. Similarly, the moderating role of colleague support in the relation between role overload and emotional exhaustion was examined. In the fully mediated model, the effect of role overload on exhaustion was as follows: β = .76, p < .001, (see also Figure 4.4). For the sub-sample of respondents experiencing high colleague support, the results were (β = .79, p < .001) while for the subsample of low colleague support, the results were (β = 1.12, p < .001). These results indicate that the role overload and exhaustion is stronger when colleague support is low rather than high. However, when colleague support is high the effect of role overload is still evident but weaker meaning that colleague support only partly buffers the negative relationship between role overload and exhaustion.

Figure 4.2: Model Path Coefficients

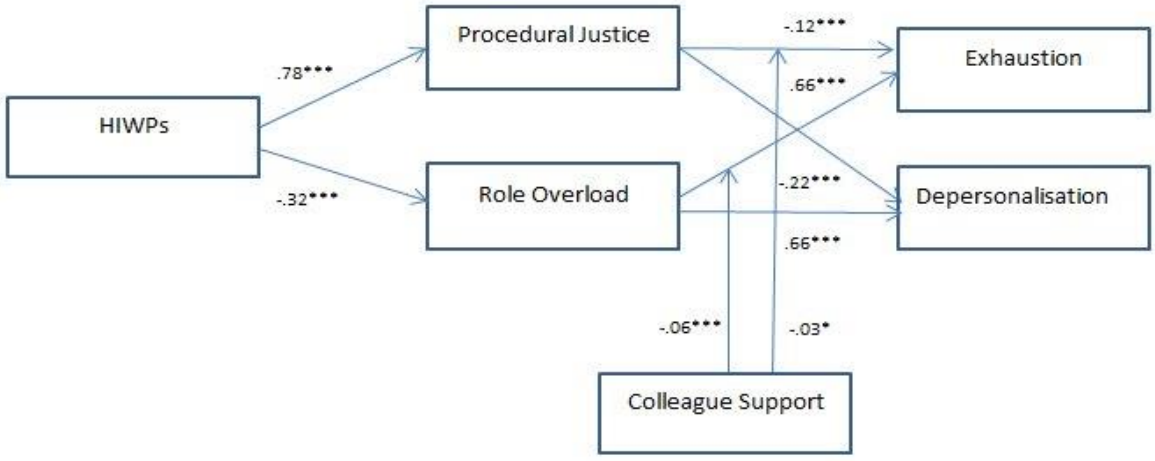


Figure 4.3: Moderators of Colleague Support in the Procedural Justice - Exhaustion Relationship

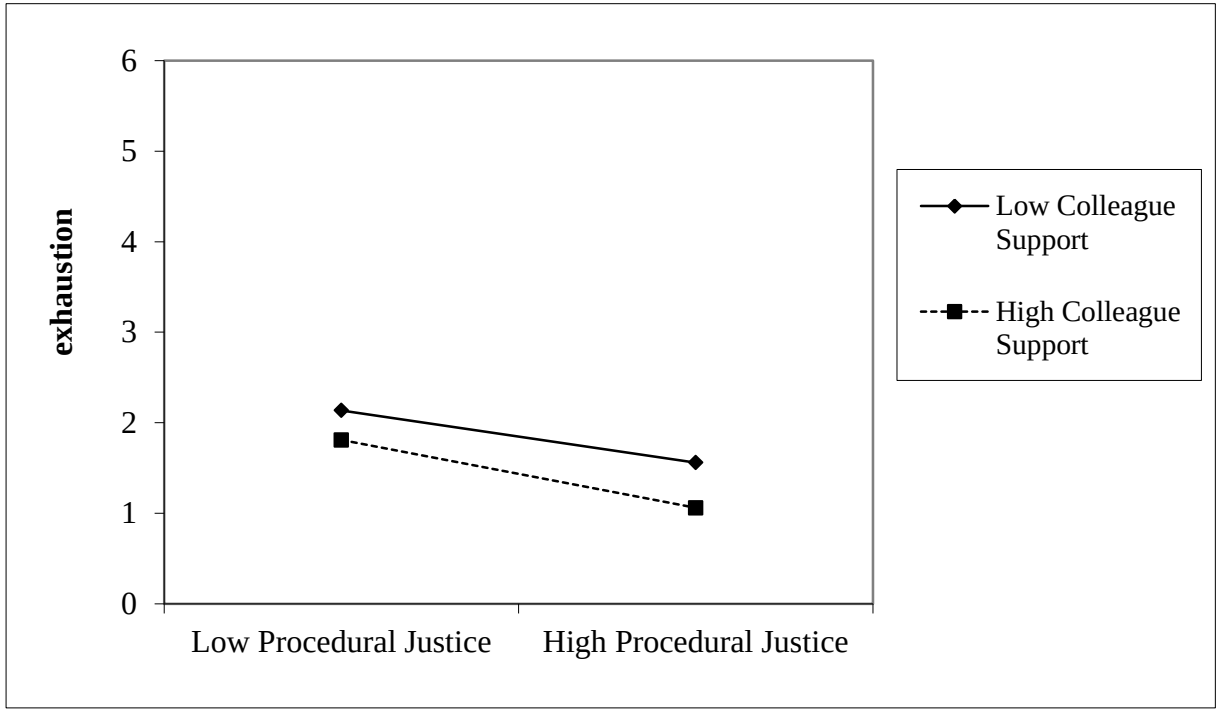
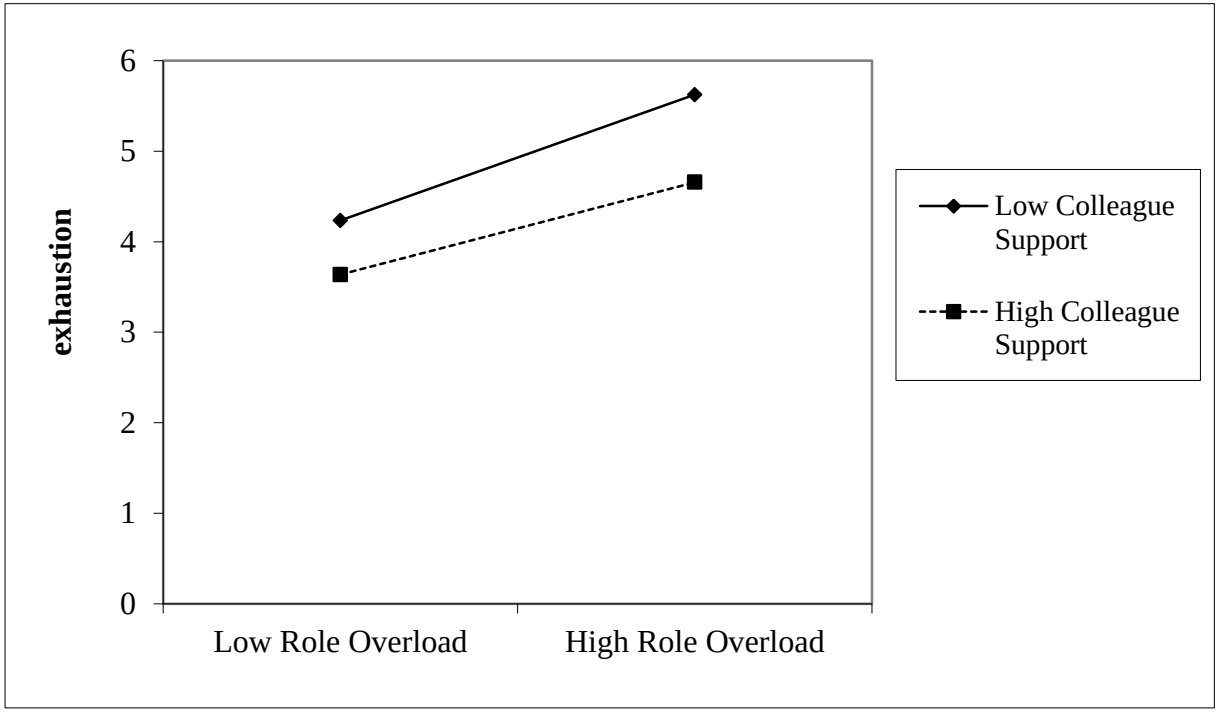


Figure 4.4: Moderators of Colleague Support in the Role Overload - Exhaustion Relationship



4.9 Discussion

The primary purpose of this study was to investigate the simultaneous mediating role of procedural justice and role overload in the relationship between perceptions of HIWPs and burnout. Moreover, the objective was to determine whether colleague support moderated the procedural justice-burnout and role overload-burnout relationship. This study contributes to extending our knowledge in the HRM and occupational health psychology literature in several ways. First, with the purpose of further investigating workers' experiences of HIWPs, this is one of the first studies to test the impact of HIWPs on nurses' burnout. While some studies have found that HIWPs are associated with lower burnout in a call center and construction worker context (Castanheira & Chambel, 2010; Sun & Pan, 2008) others have sampled a wide range of industries such as the retail and finance sector, and found the opposite (Kroon et al., 2009). Corroborating the predictions of COR theory, perceptions of HIWPs could be considered as an important resource for nurses (Wheeler et al., 2012) and these perceptions of HIWPs are associated with lower levels of burnout. In the health care context, therefore, support is found for the 'mainstream' rather than the pessimistic or labour process theory perspective (Harley et al., 2007). However, unlike previous studies (e.g. Castanheira & Chambel, 2010), the effect of HIWPs on burnout is not direct. Instead, our findings suggest the existence of intermediate processes that are necessary in order for the desired effects of HIWPs to occur.

The second contribution of this study is that it proposed and empirically investigated procedural justice as a resource and role overload as a job demand to further elucidate on this link. Procedural justice has been previously investigated in the link between HIWPs and employee attitudes and behaviours (Kuvaas, 2008; Pare & Tremblay, 2007; Wu & Chaturvedi, 2009). However, only one study to date has investigated its role in the link between HPWP and burnout (Kroon et al., 2009). The study by Kroon and colleagues failed

to find a mediating effect as HPWP did not have a significant effect on procedural justice. As noted above, the authors related this finding to the fact that the target point for providing procedural justice may be more reliably determined from supervisors or managers.

This is also recognised by Wu and Chaturvedi (2009), who considered line managers as the target of procedural justice in their study which investigates the mediating role of procedural justice in the relationship between HPWP and employee attitudes (job satisfaction and affective commitment). Wu and Chaturvedi (2009) applied social exchange theory (Blau, 1964), in order to highlight how HPWP are perceived by employees as a sign of support and devolution of control from the organisation and its representatives, which results in the reciprocation of positive attitudes and behaviours. The findings of the present study revealed that procedural justice fully mediated the association between perceived HIWPs and burnout. HIWPs represent an important resource, which allows other resources, i.e. procedural justice, to develop. Put differently, perceptions of HIWPs ensure that employees' resources are not threatened with loss or lost (i.e. injustice) and therefore they are less vulnerable to burnout (Cole et al., 2010). HIWPs are believed to be important because giving employees control over and input into decision making processes ensures that decisions are appraised as fairer (Thibaut & Walker, 1975). Therefore, the present study which measures employees' perceptions departs from the findings of Kroon et al. (2009), although confirms their assertion that managers are closer to employees and are more likely to represent the source of justice. Our study also considers role overload as a critical job demand that could explain why HIWPs reduce burnout. The 'mainstream' perspective suggests that HIWPs are associated with lower job demands and burnout. Conversely, the 'exploitation hypothesis' suggests that HIWPs are associated with increased job demands and burnout (Kroon et al., 2009). Results revealed that HIWPs not only directly reduced role overload but role overload also fully mediated the influence of HIWPs on burnout. Consistent with COR theory and, in

particular the ‘resource investment principle’, those with more resources (i.e. HIWPs) are less vulnerable to resource loss and are more capable of orchestrating resource gain to ameliorate overload and burnout (Hobfoll & Freedy, 1993). HIWPs in this instance may act as an instrumental resource given that they are concerned with developing broader horizons among employees so that they can think of better ways to do their jobs (Wood et al., 2012). Moreover, the discretion afforded by HIWPs (e.g. empowerment) means that employees can respond to certain job demands how and when they want which reduces burnout (Bakker & Demerouti, 2007). Therefore, HIWPs provide control and discretion as well as the appropriate skills to deal with a demanding workload and thus they offer a significant coping mechanism for employees (Bartram et al., 2012; Sun & Pan, 2008). By investigating procedural justice and role overload as intermediary mechanisms in the HIWPs – burnout relationship, we contribute to the ‘black box’ problem (Castanheira & Chambel, 2010). More specifically, by applying COR theory from the occupational health psychology literature, we contribute to the lack of theorising and empirical work in the HIWPs and broader well-being link (Edwards & Wright, 2001). Given that COR is considered as the leading theory in terms of understanding the processes leading to burnout (Halbesleben & Buckley, 2004), its relevance to the hypothesised relations in this study was seen as important and beneficial for theory development.

The third contribution of this study is that it responds to calls from scholars to further investigate the role of social support within the context of HIWPs (Butts et al., 2009). As predicted, we found evidence for the notion that colleague support moderates the relationship between procedural justice and exhaustion and the relationship between role overload and emotional exhaustion respectively. The moderating effects of colleague support for the procedural justice-emotional exhaustion relationship suggests that being treated fairly when accompanied with colleague support has an amplifying effect. It provides yet another source

of support for nurses. This could occur because ones pool of positive resources often cluster together and are thus further expanded which improve well-being (Hakanen, Perhoniemi & Toppinen-Tanner, 2008). Interestingly, however, supplementary analysis revealed that when colleague support was low, procedural justice no longer influenced burnout. This highlights the prominence of possible 'loss spirals' occurring, implying that people who lack resources are susceptible to losing even more resources (Salanova et al., 2010). In order to produce the lowest level of exhaustion, procedural justice and colleague support need to be both at high levels. The prominent role of colleague support in this study is perhaps due to the fact that colleagues in particular are a highly valued source of support for nurses and usually rely on colleagues before seeking out any other source of support (Spooner-Lane, 2004). This is the first study, to the authors' knowledge, which considers this interaction effect of colleague support - procedural justice on burnout. Although the moderating effects of colleague support has been found in the stressor-strain relationship (e.g. Bakker et al., 2005; Cohen & Willis, 1985; Halbesleben, 2006), the results are far from conclusive (Carlson & Perrewe, 1999). Indeed, some authors have found a reverse buffering effect of colleague support as support (talking with coworkers) can often legitimise negative feelings about the workplace or its demands (Fernandez, 1995). There is no evidence for this contention in the current study. That said, the results reveal that colleague support partly rather than completely buffers the effect of role overload on exhaustion as the relationship remained significant. From a practical point of view, these moderation results suggest that those responsible for implementing HIWPs need to be aware of broader social factors, such as colleague support. Indeed, attempts to increase procedural justice and reduce role overload may not achieve the intended effects if colleague support is absent. Despite these findings, there was no support for the moderating effect of colleague support for procedural justice and role overload in terms of their relationship with depersonalisation. This may come across as surprising given

that it is widely assumed that social support is more strongly related to depersonalisation than emotional exhaustion (e.g. Demerouti et al., 2001). However, Halbesleben (2006) notes that a criticism of COR theory and, in particular the 'primacy of resource loss' principle, is its failure to recognise that social support can stem from a number of sources (coworker, supervisor, family, friends). As demands are most closely related to exhaustion, he argues that work related sources of support may be more likely to influence demands and so colleague support is an instrumental source of support more strongly related to exhaustion. Indeed, coworkers are in a position to offer suggestions that could lead to reductions in demands (e.g. by taking over their tasks). However, the authors posit that nonwork sources of support (e.g. friend, spouse) may be more strongly related to depersonalisation because, although they cannot provide tangible support to reduce demands, they act as a form of emotional support that encourage employees not to withdraw emotionally from their job (depersonalisation).

The final contribution of this study is that it investigates the proposed model in the health care context among a random sample of nurses. Nursing is an occupation that is believed to score among the highest of all health care professionals in terms of burnout (Aiken et al., 2002; Felton, 1998). Also, nurses who are burned out with their jobs are less likely to provide optimal patient care (Vahey, Aiken, Sloane, Clarke & Vargas, 2004). Therefore, it seems that HIWPs are important for nurses as they assist them in dealing with their workload and increases perceptions of fairness, which in turn results in lower levels of burnout. Testing these proposed relationships among a homogeneous representative sample rules out many confounding factors such as occupational differences and is, therefore, a methodological strength of this study. It is interesting to note that some of the relationships tested in this context differ from previous studies. For example, previous research, in addition to the results of this study has shown that procedural justice is significantly and negatively related to

burnout (Noblet & Rodwell, 2008; Kroon et al., 2009). However, Cole et al. (2010) failed to find a significant relationship between procedural justice and burnout. Also, Kroon and colleagues (2009) failed to find a significant relationship between HPWP and procedural justice while our study did. The aforementioned insights about the importance of the relationship between the supervisor and employee are important in interpreting the results for both of these contradictions given that we consider managers as the source of procedural justice rather than the organisation. Indeed, while HR systems can lay out procedures to be followed in the implementation of HR, individual managers actually administer these procedures (Kuvaas, 2008). Also, in the study by Cole et al. (2010), it should be recognised that they considered the full spectrum of justice types while we focus on procedural justice only. Another interesting contradiction is in relation to the study by Kroon et al. (2009) who found that HPWP were associated with higher levels of job demands in the form of psychosocial job conditions. While we focus on a different job demand (role overload), HIWPs were associated with lower rather than higher role overload. Therefore, rather than a hindrance demand, HIWPs from the perspective of nurses reflects a critical resource which can alleviate demands (Bartram et al., 2012).

4.10 Practical Implications

The results from this study have a number of practical implications for managers in health care organisations in terms of reducing the costly problems of burnout (e.g. Altum, 2002). Consistent with the predictions of COR theory (Hobfoll, 1989), higher levels of HIWPs are associated with higher levels of procedural justice perceptions and lower levels of role overload, which in turn are associated with lower levels of burnout. From a policy and practice perspective, this is important because it provides insights to practicing managers

regarding the factors that must occur in order for HIWPs to have their desired effects. Indeed, implementing HIWPs is pivotal but the present findings suggest that management actions should pay attention to broader issues such as the distribution of workload and fair decision making processes. Workload is the most common stressor among nurses that depletes their energy resources (Greenglass et al., 2001), while those who are treated procedurally unjust can doubt their capacity to cope, which further depletes their resources (Cole et al., 2010). At the same time, the social context of work in the form of colleague support has a role to play. Indeed, regardless of the impact of HR practices, colleague support may be able to buffer the negative effects of job demands such as role overload on exhaustion and enhance their existing resources that stem from being treated fair by their managers. Reducing nurses' burnout is likely to have broader implications for hospitals as it may even reduce nurses' tendencies to leave the profession (Jourdain & Chênevert, 2010). Overall, it seems that HIWPs represent a positive resource for employees' which improves their health related outcomes by fostering additional resources and avoiding the loss of other valued resources. This should ease hospital management concerns regarding the potential exploitative nature of HRM in the health care sector (Harley et al., 2007).

4.11 Limitations and Future Directions

This study has a number of limitations. The sample was composed of nurses from a large number of Canadian hospitals. Therefore, it would be interesting for future research to investigate the same relationships using a wider range of occupational groups in health care or consider a different sector entirely. The extent to which the results also uphold in different cultural contexts also deserves further research attention. Another limitation could be the presence of common method bias. However, it is likely that no mediator should appear when

the results are based entirely on common method bias (Rupp & Spencer, 2006) and the authors tested for its effects using the CFA with the marker variable technique which confirmed that common method bias does not pose problems. This study tested the relationship between individual perceptions of HIWPs and its impact on employee outcomes at the individual level. It is important to highlight that variation in HIWPs is also likely to exist across hospitals and even across wards in those hospitals (Veld et al., 2010). While supplementary analysis revealed that variation exists between hospitals in terms of HIWPs, albeit a very small amount, no variation exists between hospitals in terms of nurses' scores on burnout. Therefore, future research should investigate HIWPs across hospitals and, perhaps more so, wards in terms of their impact on burnout that might differ between units of analysis in other contexts. It is probable that variation in HR systems exists across hospitals and wards as a result of variation in intended, actual and perceived HR practices (Nishii & Wright, 2008). Another limitation is that reverse causality between some of the variables cannot be ruled out. For example, a reciprocal relationship could exist between burnout and social support to the extent that social support is mobilized as a coping mechanism when burnout does actually occur (Halbesleben, 2006). Although the study tested job demands and resources as intermediary mechanisms, there are likely to represent boundary conditions of HIWPs-burnout link and testing this possibility in future research will provide us with critical information regarding the conditions under which HIWPs will or will not work.

Chapter Five

Discussion and Conclusions

5.1 Introduction

The primary purpose of this PhD thesis was twofold (a) to investigate the impact of employees' perceptions of HIWPs on self-reported burnout, and (b) to examine the mechanisms underpinning this relationship. In this chapter, the answers to these questions are discussed based on the results obtained from the three studies presented. Following this, the theoretical implications and overall contributions of the research are discussed. The limitations of the research are then outlined and potential recommendations for future research are provided. Finally, the practical implications derived from the results are discussed.

Question 1: *What effect (positive or negative) do employees' perceptions of HIWPs have on self-reported burnout in the health care context?*

In the wider HRM literature dedicated to understanding the HIWPs-well-being and performance relationship, consensus is emerging that HIWPs have positive consequences for employees' positive well-being outcomes such as job satisfaction, commitment and happiness (Van de Voorde et al., 2012). However, the impact of HIWPs on negative or health related well-being outcomes is still not clear as very few studies have directly tested such relationships (Peccei et al., 2013; Van de Voorde et al., 2012). Moreover, in studies that do in fact consider the effects of HIWPs on health related well-being outcomes, such as stress and burnout, the results are far from conclusive. Indeed, some studies show positive benefits of HIWPs (e.g. Butts et al., 2009; Castanheira & Chambel, 2010; Sun & Pan, 2008), while others show negative effects of HIWPs (e.g. Godard, 2001; Kroon et al., 2009; Ramsay et al.,

2000). The objective in this thesis is to further investigate the relationship between HIWPs and burnout in the healthcare context and take a step towards resolving these inconsistent findings (Chapters 2, 3 and 4). Importantly, the thesis adopted COR theory (Hobfoll, 1989) as a general framework and proposed that employees' perceptions of HIWPs represent important resources for employees, which ameliorates their levels of burnout. This is the first study in the HRM literature to consider and apply COR theory in the link between employees' perceptions of HIWPs and well-being outcomes. This is surprising given the theory's utility and widespread applicability in the occupational health psychology literature (Halbesleben & Buckley, 2004). COR theory recognises that HIWPs could represent an important resource for employees (e.g. Wheeler et al., 2012), which have the potential to alleviate their burnout (Bartram et al., 2012; Sun & Pan, 2008). HIWPs provide empowerment and control to employees which affords them the requisite time and opportunity to adjust to their job demands as they please, and this is particularly important in reducing stress and burnout (Butts et al., 2009; Castanheira & Chambel, 2010). They provide employees with more resources and coping options which have a critical role in maintaining their well-being (Bartram et al., 2012). Such HIWPs are believed to be instrumental for employees because they enable them to work more smartly (Edwards & Wright, 2001) and thus can think of better ways of doing their jobs (Wood et al., 2012). From a COR theory perspective, this means that less personal and energetic resources have to be invested into the work environment and this protects them from burnout (e.g. Hobfoll, 2002; Sun & Pan, 2008). In the health care sector, burnout is a very serious and pervasive problem (Felton, 1998; Maslach et al., 2001). At the same time, HIWPs are viewed as important resources for health care employees (Bartram et al., 2012; Rondeau & Wagar, 2006). Indeed, research shows that one of the differentiating factors of magnet status (employer of choice) hospitals from regular hospitals is the adoption of HIWPs, which embrace empowerment/autonomy

and trust as core underlying values (Harmon et al., 2003; Rondeau & Wagar, 2006). These hospitals score more highly on hospital performance outcomes and enjoy more satisfied and less burned out employees (Aiken et al., 2002).

Based on existing research on HIWPs and burnout (e.g. Castanheira & Chambel, 2010), as well as the theoretical propositions outlined in COR theory, Study 1 proposed and found support for the notion that positive perceptions of HIWPs are associated with lower levels of burnout among health care employees. The four HIWPs identified are likely to enable employees to obtain the requisite coping skills to deal with the 'losses' associated with burnout (Sun & Pan, 2008). Indeed, a key premise of COR (i.e. The Resource Investment Principle) is that those with higher resources (e.g. HIWPs) are less vulnerable to resource loss and are more capable of orchestrating resource gain to improve their well-being (Hobfoll & Freedy, 1993). Study 2 investigated the impact of employees' perceptions of HIWPs on long term burnout (three years later). This study was conducted in the same hospital among 185 health care employees who completed the questionnaire at both time points. In this study, perceptions of HIWPs did not directly influence burnout overtime. Instead, this relationship was fully mediated by P-O fit. This is consistent with the observations of Vanhala and Tuomi (2006) who argued that the link from HRM to burnout is too distal, thus necessitating the investigation of mediating variables. Investigating the impact of HIWPs on long term burnout is important for both theoretical and methodological reasons. Some authors suggest that cross-sectional studies can often fail to capture the reality of what is happening in processes governed by COR and argue that a time lagged research design is necessary (Halbesleben et al., 2014). This may be particularly relevant to burnout as it is a well-being outcome which is largely believed to develop over time (Maslach et al., 2001). Also, in the occupational health psychology literature, it is believed that the continued reliance on cross-sectional designs has limited the evidence that can be offered to support theories of burnout and interventions

designed to reduce its occurrence (Halbesleben & Buckley, 2004; Maslach et al., 2001). This is the first study, to the author's knowledge, that investigates the impact of HIWPs on long term burnout which is measured here three years later. Although it is typical for studies to use a one year time lag when investigating the impact of HR practices on outcomes (Guest, Michie, Conway & Sheehan, 2003), authors have noted that a three to four year time lag may be required before a relationship between HRM and employee outcomes would be observed (Wright & Haggerty, 2005). Therefore, the results of this study would suggest that for HIWPs to have any sustained effect on burnout, this could take time to work. In the context of the overall thesis results, this implies that while HIWPs initially provide employees with the resources to cope with the burnout they experience (as found in study 1), other factors governed by COR (i.e. increasing P-O fit) must occur first in order for HIWPs to exert their influence on burnout in the longer term.

Study 3 also investigated the impact of employees' perceptions of HIWPs on burnout among 2,174 nurses working in 105 hospitals using a cross-sectional research design. This study is unique in three ways. First, the investigation is conducted among one occupational group i.e. nurses, who are believed to score among the highest of all health care professionals in terms of burnout (Felton, 1998; Le Blanc et al., 2007). Focusing on a homogeneous sample of nurses somewhat eliminates confounding factors such as occupational differences that could have a role in the previous studies. Second, post hoc analysis revealed that, in this context, there were no differences in burnout across hospitals. This shows that, in the absence of interventions, there are even numbers of burned out employees regardless of the hospital in which they work. According to Shirom (2010), insight on the prospect of organisational level burnout is important and is a research area which has not been sufficiently explored. In the same vein, the prospect that perceptions of HIWPs are shared (climate of involvement) among employees in the same organisation was also tested. The results revealed that there

was indeed some agreement on involvement across organisations (ICC1 = .08), albeit most variation appeared to operate at the individual level of analysis. Therefore, the results seem to corroborate the suggestions of Bowen and Ostroff (2004) that perceptions of HR practices are an individual level phenomenon as employees even within the same organisation can respond differently to the same HR practices. This is because individuals have their own cognitive schemas for attending to and processing information related to HR practices (Wright & Haggerty, 2005). Third, similar to Study 2, which did not find a direct effect of HIWPs on burnout, Study 3, which is conducted among a large sample of nurses, revealed that perceptions of HIWPs impacted burnout only indirectly via procedural justice and role overload. This again points to the importance of processes governed by COR (increasing resources and reducing demands) in explaining how HIWPs work in alleviating burnout.

Overall, the empirical evidence in this thesis supports the optimistic or 'mainstream' perspective regarding the effects of HIWPs (Peccei, 2004; Harley et al., 2007). Indeed, employee perceptions of HIWPs were associated with lower levels of self-reported burnout across the three studies undertaken. Therefore, at least in the health care context, investing in HIWPs represents an important and worthwhile organisational endeavour. However, while perceptions of HIWPs are directly associated with lower burnout in Study 1, the other studies in the thesis (Study 2 and Study 3) demonstrate a fully mediated effect, thus suggesting that HIWPs may need to develop other resources and reduce demands for employees to eventually experience lower burnout. In other words, HIWPs work only by enhancing resources and reducing demands in this context. As a whole, the thesis would confirm the postulation by Edwards and Wright (2001) that the effects of HIWPs are, at best, indirect.

Question 2: *What are the underlying mechanisms for the proposed link between employees' perceptions of HIWPs and self-reported burnout in the health care context?*

Since the ground breaking study of Huselid (1995), who was among the first scholars to demonstrate a positive relationship between the investment in sophisticated HRM practices and organisational performance, a large number of scholars have carried out empirical studies to further investigate this relationship. However, as the evidence for this relationship accumulated over time, it became clear that it was no longer sufficient to demonstrate that HRM practices improve performance, but more important to know how this actually occurs. This became known as the 'black box' problem in HRM and scholars began to focus research on this line of enquiry (e.g. Guest, 2011). One of the key premises of this work is that HRM practices improve organisational performance through their impact on employees, i.e. their knowledge, skills and abilities, as well as their attitudes and behaviours and well-being (e.g. Nishii & Wright, 2008; Paauwe, 2009). However, as emphasised above, we are still unclear regarding what effect HIWPs actually have on employees themselves, especially in terms of their well-being (Harley et al., 2007; Legge, 1995; Peccei, 2004; Van de Voorde et al., 2012). Moreover, the underlying mechanisms in terms of how HIWPs influence well-being outcomes remain unclear. More theoretical and empirical work dedicated to understanding this relationship is therefore required (e.g. Edwards & Wright, 2001; Peccei et al., 2013; Wood et al., 2012). A number of authors have noted that changes to employees' job demands and resources might explain how HIWPs exert their influence on employee well-being outcomes in general (Peccei et al., 2013; Wood & de Menezes, 2011) and burnout in particular (Castanheira & Chambel, 2010; Kroon et al., 2009). Therefore, consistent with COR theory (Hobfoll, 1989) as a guiding framework, this thesis considers the prominent role

of job demands and resources as intermediary mechanisms that explain how HIWPs can alleviate employees' burnout.

Study 1 proposed and tested the mediating effect of role conflict, role overload and role ambiguity in the relationship between perceptions of HIWPs and burnout. The focus on numerous job demands in this study is important, given that the process by which HIWPs translate into job demands is less well understood (Castanheira & Chambel, 2010; Peccei et al. 2013). The results revealed that role conflict and role overload partially mediated the influence of HIWPs on both dimensions of burnout (emotional exhaustion and depersonalisation). Consistent with COR theory (Hobfoll, 1989), HIWPs therefore enable employees to obtain the requisite resources to cope with role conflict and role overload and this in turn enables employees to avoid the resource loss associated with burnout. Overall, role conflict and role overload are seen as a threat to employees' resources as these job demands interfere with their ability to adequately perform their job, which ultimately causes burnout (Stordeur et al., 2001). However, HIWPs provide employees with the discretion and control that is required to better adjust to their job demands (i.e. role overload and role conflict), which in turn results in lower levels of burnout (Castanheira & Chambel, 2010). The involved worker also has a better understanding of how decisions are arrived at and what is expected of them, thus reducing role conflict (Fenton-O'Creevy, 1998). Despite the mediating effect of role overload and role ambiguity, no mediating effect was found for role ambiguity. Therefore, the findings of Study 1 in this thesis indicate that HIWPs do not necessarily bring about lower levels of burnout by reducing this demand. Nevertheless, the significant negative relationship between perceptions of HIWPs and role ambiguity is interesting in itself. In fact, it still emphasises that perceptions of HIWPs are critical resources that are capable of clarifying the nature of employees' roles and responsibilities. Moreover, at least in this health care context, it contradicts previous postulations that HIWPs may increase

role ambiguity due to the expected proactivity that employees are expected to exhibit in response to such systems (Wood & de Menezes, 2011). It also contradicts the notion, consistent with the 'exploitation hypothesis', that HIWPs increase job demands. Indeed, Kroon et al. (2009) revealed that HPWP increase psychosocial job conditions (i.e. the speed of work) among employees. However, the present study provides evidence in favour of the 'mainstream' or 'optimistic' perspective, whereas no support for the 'exploitation hypothesis' is evident from the results.

With the aim of investigating whether and how perceptions of HIWPs influence long term burnout, Study 2 proposed and found support for the mediating effect of P-O fit in the relationship between time 1 HIWPs and time 2 burnout. Therefore, HIWPs work in lowering burnout, in this context, by enhancing employees' perceptions of P-O fit. In this sense, perceptions of HIWPs enable employees to feel sufficient P-O fit, which ensures that they have ample personal resources that can be invested back into the work environment to deal with burnout (Wheeler et al., 2013). In other words, HIWPs are seen as a "resource caravan passageway" (Hobfoll, 2011), which elevates perceptions of P-O fit and creates a resource 'gain spiral' of P-O fit (Wheeler et al., 2013). This is the first study, to the author's knowledge, that investigated the mediating role of P-O fit in the HIWPs-burnout relationship. By investigating these relationships, the study brings together various aspects of P-O fit, HR and psychological resource theories (i.e. COR theory) in the same model. Specifically, in addition to the ASA framework (Schneider, 1987), the study integrated COR theory as a middle range theory in understanding P-O fit. In doing so, the relevance of the work on magnet status hospitals (Rondeau & Wagar, 2006) was also highlighted in order to demonstrate how HIWPs are a valued resource that can increase P-O fit and, in turn, alleviate burnout.

Study 3 proposed and tested the simultaneous mediating role of procedural justice and role overload in the relationship between perceptions of HIWPs and burnout. Results revealed that procedural justice and role overload fully mediated the influence of HIWPs on burnout. Therefore, it highlights the critical role of HIWPs in simultaneously increasing resources and reducing job demands, in order to ameliorate burnout. Testing the mediating role of procedural justice and role overload is important for a number of reasons. In the context of the sample chosen i.e. nurses, role overload is regarded as the most pressing job demand they face (e.g. Felton, 1998; Duquette et al., 1994) while procedural justice represents a resource for them which is highly valued (Elovainio et al., 2001). Of the three major job demands (role conflict, role overload and role ambiguity), role overload also emerged as the strongest predictor of burnout in Study 1. Therefore, it was seen as important to investigate its role in addition to job resources, for the purposes of determining whether HIWPs can simultaneously increase resources and lower demands, in order to bring about lower levels of burnout. One study to date has investigated the mediating role of job demands (psychosocial job conditions) and resources (procedural justice) in the link between HPWP and burnout (Kroon et al., 2009). However, Kroon and colleagues offer many useful suggestions to build on their research model in order to contribute to the debate regarding the impact of HR practices on burnout. Study 3 takes on board these suggestions, although it offers unique dimensions which aim to strengthen confidence in the results. Kroon and colleagues (2009) proposed and found support for the notion that HPWPs resulted in increased job demands (psychosocial job conditions). Although Study 3 focuses on a different job demand (role overload), unlike Kroon and colleagues, the findings of this thesis offer no support for the exploitative nature of HRM in terms of increasing job demands. In addition, Kroon and colleagues, contrary to their own predictions, failed to find a significant positive relationship between HPWP and procedural justice. However, Kroon et al. (2009)

and Wu and Chaturvedi (2009) argued that procedural justice may be more likely to be offered by proximal targets such as supervisors or managers, rather than the more distal target of the organisation. Consequently, Study 3 adhered to the authors' suggestions and examined procedural justice, which is provided by managers, as opposed to the organisation. Indeed, as observed by Kuvaas (2008), while HR systems can lay out the procedures to be followed in the implementation of HR practices, it is the individual's manager who actually administers these procedures. In the same vein, the current study is cognisant and consistent with the recent work which combines COR theory (Hobfoll, 1989) and relational attribution theory (Campbell et al., 2013) in order to explain how the actions directed from one source, for example, the organisation, are often attributed to another source, for example, the employee's supervisor or manager. While a number of studies have tested the mediating effect of procedural justice in the relationship between HIWPs and employee attitudes and behaviours (e.g. Pare & Tremblay, 2007; Kuvaas, 2008; Wu & Chaturvedi, 2009), no study has considered its mediating role in the link between involvement related HR practices and the two core symptoms of burnout.

A supplementary research question which followed from Study 3 was to examine, in greater detail, the conditions under which the proposed mediators (role overload and procedural justice) of the HIWPs and burnout relationship were influenced by colleague support. In the wider high involvement literature, Butts et al. (2009) noted that the extent to which social support, such as colleague support, influences the outcomes of HIWPs in predicting stress related outcomes deserves further research investigation. Moreover, there have been quite a few studies which have examined social support as a mechanism to reduce burnout (e.g. Cohen & Willis, 1985; Halbesleben, 2006; Jenkins & Elliot, 2004; Sochos et al., 2012). However, one line of enquiry which has received mixed support concerns the extent to

which social support moderates or buffers the effect of job demands on strain (e.g. Carlson & Perrewe, 1999; Fenlason & Beehr, 1994; Jenkins & Elliot, 2004). This buffering effect as referred to by Ganster et al. (1986), suggests that "the relation between stress and strain is stronger for persons with low levels of social support than those with high levels of social support" (p.102). At the same time, consistent with COR theory (Hobfoll, 1989) and, in particular with the notion of a 'resource caravan' or resource 'gain spiral' (Hobfoll, 2011), resources are hypothesised to enhance other resources (gain spiral) and resource loss is argued to produce additional losses (loss spiral) (Hakanen, Peeters & Perhoniemi, 2011). Indeed, Rini, Dunkel, Schetter, Wadhwa and Sandman (1999) support the idea in COR theory that having one major resource is typically linked with having other resources, and likewise in the case of resources being absent. Study 3 was primarily concerned with the mediating mechanisms (demands and resources) linking HIWPs to burnout, although the possibility was recognised that other social factors in the form of social support may influence the outcomes of HIWPs (Butts et al., 2009). Specifically, based on the importance that nurses attach to colleague support (e.g. Jenkins & Elliot, 2004), it recognises that the proposed impact of job demands (role overload) and resources (procedural justice) on burnout may be influenced by other intervention strategies, such as colleague support (Shirom, 2010). The results from this study found support for the buffering effect between role overload and the emotional exhaustion component of burnout but not depersonalisation. Therefore, this confirms other research which highlights and finds support for the buffering hypothesis (Bakker et al., 2005; Cohen & Willis, 1985; Halbesleben, 2006). However, it is contrary to other findings which failed to find a significant buffering effect (e.g. Ganster et al., 1986; LaRocco & Jones, 1987; Spooner-Lane, 2004) and other studies which find a reverse buffering effect (Fenlason & Beehr, 1994; Jenkins & Elliot, 2004). The non-existent or reverse buffering effect between demands and burnout can occur because colleagues can often reinforce the negative aspects

of work e.g. talking about how difficult customers are (Fenlason & Beehr, 1994). In this case, a colleague's discussion of a particular patient can dwell on the various difficulties encountered while providing care (Jenkins & Elliot, 2004). As noted by LaRocco et al. (1980), coworkers can often "convince us that job conditions…are as bad as or even worse than, we thought" (p.214). Indeed, a related study among teachers by Bakker and Schaufeli (2000) showed that employees who frequently talk to colleagues about problematic students had a much higher probability of experiencing burnout themselves. In this context, however, colleague support "convinces employees that job conditions are not as bad as they seem" (LaRocco et al., 1980, p. 214) and the situation is more positively perceived and therefore less threatening. This is in contrast to the study by Jenkins and Elliot (2004) and Spooner-Lane (2004) who failed to find a buffering effect of social support among nurses in the United Kingdom and Australia respectively. However, the results reveal that colleague support can only partly ameliorate this discomfort, as role overload is still strongly related to exhaustion. Similarly, colleague support was found to enhance the effect of procedural justice on the emotional exhaustion component of burnout. This is the first study, to the author's knowledge, which investigates the interaction effect of colleague support and procedural justice on burnout. Colleague support moderated the effect of procedural justice on emotional exhaustion but not depersonalisation. In other words, the negative relationship between procedural justice and exhaustion is stronger when colleague support is high rather than low. The results lend support to the notion that resources in one domain can affect resource gain in other domains which is referred to as a resource 'gain spiral' (Hakanen et al., 2008). Indeed, employees who possess a surplus of a single resource often bundle other resources around that excess resource so that it can be invested into the work environment as a means to gain more resources (Hobfoll, 2011). However, further analysis revealed that, in the absence of colleague support, the negative effect of procedural justice on exhaustion actually disappears.

Therefore, even if procedural justice is perceived to be high but colleague support is low, burnout is unlikely to be reduced. This finding, therefore, also demonstrates support for the resource 'loss spirals' argument (Hobfoll, 2002), meaning that a lack of resources (i.e. colleague support) ensures that employees are vulnerable to additional resource losses (i.e. procedural justice). Indeed, "employees who lack resources attempt to employ their remaining resources and thereby deplete their resource reserves" (Peccei et al., 2013, p.43). Although procedural justice is important, it seems that colleague support is fundamental. Perhaps, this is because nurses rely very heavily on colleagues for dealing with burnout (e.g. Gilbert et al., 2010) and because of their proximity, often approach colleagues before accessing any other form of support (Spooner-Lane, 2004). Despite these findings, there was no support for the moderating effect of colleague support for procedural justice and role overload in terms of their relationship with depersonalisation. This may come across as surprising given that it is widely assumed that social support is more strongly related to depersonalisation than emotional exhaustion (e.g. Demerouti et al., 2001; Lee & Ashforth, 1996). However, Halbesleben (2006) notes that a criticism of COR theory and in particular the 'primacy of resource loss' principle is its failure to recognise that social support can stem from a number of sources (co-workers, supervisor, family, friends). As demands are most closely related to exhaustion, he argues that work related sources of support may be more likely to influence demands and so colleague support is an instrumental source of support more strongly related to exhaustion. This is also recognised by Jenkins and Elliot (2004), who argued that work colleagues are able to provide a greater range of supportive behaviours for dealing with work related problems, for example, practical assistance in completing tasks, than external sources. As noted by Ray (1987), "the overt and subtle stresses in the workplace are known to members and are unclear to non-members" (p.174). However, the role of nonwork sources of social support are not inconsequential. Halbesleben (2006) posits that

nonwork sources of support (e.g. friend, spouse) may be more strongly related to depersonalisation because, although these nonwork sources of social support are unable to provide tangible support to reduce demands, they act as a form of emotional support that encourage employees not to withdraw emotionally from their job (depersonalisation). This non-significant relationship with regard to depersonalisation might also be explained by the different factor structure of burnout. Maslach and Leiter (1988) suggest that burnout occurs in a sequence whereby one firstly feels high levels of emotional exhaustion and secondly, in order to cope with this exhaustion, detach from those around them, or in words, experience depersonalisation. In this regard, no buffering effect could occur because it is a step removed from the causal link. Indeed, colleague support might buffer the link between emotional exhaustion and depersonalisation. In the same vein, getting to the stage of depersonalisation might mean that nurses have already detached themselves from those around them, including both patients and colleagues. Therefore, social support is not going to be as effective in relation to this particular symptom of burnout.

5.2 Research Contributions

This thesis offers several contributions to the literature in HRM and occupational health psychology. First, this study contributes to the major debate in the HRM field regarding the influence of HIWPs on employees' well-being outcomes (Peccei et al., 2013; Van de Voorde et al., 2012; Wood & de Menezes 2011; Wood et al., 2012). A recent meta-analytic review concluded that the impact of HR practices on employee well-being outcomes depends on the particular type of well-being studied (Van de Voorde et al., 2012). In fact, it concluded that while HR practices generally have positive beneficial effects for happiness related well-being outcomes (i.e. job satisfaction), the opposite is found when considering health related well-being outcomes (i.e. burnout). However, even by the authors' own admission, this should be

considered tentative given that only six studies included health well-being outcomes in the analysis. This thesis partly addressed this paucity of research (although it does not measure performance) by investigating the health well-being outcome of burnout across three studies in order to determine its association with HIWPs. Similar to other scholars who regard burnout as a critical measure of well-being at work (Maslach et al., 2001; Tummers, Van Merode & Landeweerd, 2002), this thesis focuses on burnout. Moreover, as previously mentioned, given the pervasive problem of burnout in modern society, in general, and among health care employees, in particular, it is necessary to investigate what possible organisational actions can be taken to alleviate its occurrence (Le Blanc et al., 2007; Shirom, 2010).The results from the three presented studies in this thesis demonstrate that employees' perceptions of HIWPs are indirectly and negatively associated with burnout. Therefore, the present findings do not provide support in favour of the negative effects of HIWPs on employee well-being or, labelled by some (Peccei, 2004; Wood et al., 2012), the pessimistic or labour process theory perspective. Numerous scholars have found that many forms of HR practices are exploitative for employees to the extent that they are associated with higher levels of stress and burnout (Godard, 2001; Kroon et al., 2009; Ramsay et al., 2000; Wood et al., 2012). For example, Godard, (2001) found that while modest levels of HPWP may benefit employees, high levels provide for a stressful work environment. Indeed, critics from the labour process theory (Braverman, 1974) tradition argue that some attempts at involvement are fakes that increase demands on workers without increasing empowerment (e.g. Delbridge, 2007; Legge, 1995). However, the three presented studies in this thesis which are conducted in the health care context, largely supports an optimistic or 'mainstream' perspective of HRM. Therefore, the results are consistent with other scholars who have found beneficial effects of HR practices for employees' health related well-being outcomes (e.g. Appelbaum et al., 2000; Butts et al., 2009; Castanheira & Chambel, 2010; Mackie et al., 2001). The

results can be now extended to the health care sector, a sector where the examination of the HIWPs-employee outcomes link has traditionally received scarce research attention (Baptiste, 2008; Harley et al., 2007; Harris et al., 2007; Leggat et al., 2011). It is possible that HR practices that have strategic important in one industry can have limited benefits in others (Rondeau & Wagar, 2001). Compared to other contexts, it is plausible to suggest that involvement is something particularly valued among health care professionals and is therefore embraced as a positive resource rather than a demand. Indeed, research shows that autonomy and control (e.g. Laschinger & Havens, 1996), is particularly valued among health care professionals, while the work on magnet status hospitals (e.g. Rondau & Wagar, 2006), demonstrates that involvement principles are not only highly valued by health care employees but that they actively seek out employment in such hospitals. Leiter (1991b) believes that burnout is an outcome that arises from the gap between employees' expectations to fulfil their professional role and the existing organisational structure. In this regard, it is plausible to suggest that HIWPs enable health care employees to perform better in a job they actually want to do, which requires a high standard of performance. This is likely to reduce stressors that would exist if such supportive conditions were not in place. The provision of resources such as HIWPs which are instrumental and valued by health care employees is likely to ensure that they feel they are capable of providing high quality care to their patients (Laschinger et al., 2001).

Second, this thesis employed COR theory (Hobfoll, 1989), in order to examine the mediating effect of job demands and resources in the relationship between perceptions of HIWPs and burnout. This comes amidst calls for further theorising in the broader HR and well-being link (Peccei et al., 2013; Van de Voorde et al., 2012; Wood et al., 2012). While COR theory is popular in occupational health psychology, it has not yet been introduced into the HR field to understand how HIWPs impact well-being outcomes such as burnout. Given

the prominent link between COR theory and burnout (Halbesleben & Buckley, 2004), this is rather surprising. Through the adoption of COR (Hobfoll, 1989), the thesis identified and empirically tested job demands and resources with the potential to act as key underlying mechanisms linking perceptions of HIWPs to burnout. Study 1 investigated role conflict, role overload and role ambiguity as mediators. Overall, role conflict and role overload emerged as key factors that explain how and why HIWPs work in lowering health care employees levels of burnout. Building on the ideas of Wheeler et al. (2013), Study 2 of this thesis integrated and adopted COR theory as a middle range theory (i.e. does not negate the inclusion of other approaches) in understanding P-O fit and its mediating role in the link between HIWPs and burnout. As it was considered as a middle range theory only, the study also drew on other theoretical approaches to build the research hypotheses (Wheeler et al., 2013). Indeed, the study was able to bridge various theories together in order to better explain the underlying link between perceptions of HIWPs and burnout. Specifically, the ASA framework (Schneider, 1987), Maslach and Lieter's (1997) model of burnout as well as COR theory (Hobfoll, 1989) were used to explain the paths in the model linking HIWPs to burnout via P-O fit. This is the first study, to the author's knowledge, that investigated and found support for the mediating role of P-O fit in the HIWPs and burnout link. Investigating the impact of HIWPs on P-O fit addresses a call in the literature to explore the role of other HR practices that go beyond selection in terms of increasing P-O fit (Boon et al., 2011). Indeed, Paauwe and Boselie (2005) make a plea for scholars to pay further attention to the employees' perceptions of HR practices and the importance of P-O fit. Study 3 sought to explain the link between nurses' perceptions of HIWPs and burnout by considering the simultaneous role of procedural justice and role overload as key underlying mechanisms. The mediating role of procedural justice and role overload in linking HIWPs to burnout is also explained through the theoretical lens of COR theory. No studies, to the author's knowledge, have investigated

procedural justice and role overload as mediators between HIWPs and both dimensions of burnout in the health care context. One study has previously investigated the relationship between HPWP and the emotional exhaustion component of burnout via the job demand of psychosocial job conditions (Kroon et al., 2009). The authors posited that HPWPs would have no effect on burnout because a positive relationship would be observed between HPWPs and procedural justice and a positive relationship between HPWPs and job demands (i.e. HPWP increases job demands) thereby leading the two mechanisms to counteract each other. While the authors did not find a relationship between HPWPs and procedural justice, job demands actually functioned as a mediator of the HPWP-burnout link, whereby HPWPs increased job demands which in turn increased burnout, thus supporting the so called pessimistic (Peccei, 2004) or 'exploitation hypothesis' (Kroon et al., 2009). Based on the non-significant relationship between HPWPs and procedural relationship as found by Kroon et al. (2009), Study 3 departs from this by considering procedural justice from managers as the target of fair procedures rather than the organisation. This recognises their call for future research and is consistent with other scholars who believe that when measuring HR practices from the perspective of employees, supervisors or managers should be considered as they enact the fair procedures (Kuvaas, 2008; Wu & Chaturvedi, 2009). Therefore, on the basis of COR theory, this study considers HIWPs as positive resources rather than a demand in influencing the outcomes of procedural justice, role overload and burnout. In this health care context, support is found for the predictions. Indeed, perceptions of HIWPs are able to alleviate burnout but this occurs indirectly through two processes (i.e. one process which increases the resource of procedural justice and through another process by alleviating the demand of role overload).

The third contribution of this thesis is that in Study 3, the interactive effect of colleague support is tested regarding the impact of the outcomes of HIWPs (procedural justice and role

overload) on burnout thereby examining in finer detail the nature of the mediating factors. Regarding role overload, contradictory results have been found regarding the so-called buffering hypothesis (e.g. Carlson & Perrewe, 1999). In the present study, however, partial support is found for the buffering effect. In this health care context among nurses, colleague support acts as a key instrumental resource which, consistent with COR theory (Hobfoll, 1989), provides employees with the resources required to cope with their demands and avoid the loss of their valued resources (Halbesleben, 2006). Also, consistent with COR theory and the 'resource caravan' concept, colleague support represents another resource which employees can draw upon in addition to procedural justice from managers and therefore this multiplicative effect has stronger effects in reducing burnout. This is also consistent with the notion of resource 'gain spirals' which demonstrates how resources can bundle together to have stronger effects on well-being outcomes (e.g. Hakanen et al., 2008). It is the combination of procedural justice from managers and colleague support that delivers the lowest level of burnout. Conversely, when colleague support is low, the effect of procedural justice from managers is mitigated, thus demonstrating that some forms of resources in health care organisations must co-exist in order for maximum effects to occur. When employees are lacking in resources (i.e. no colleague support), a resource 'loss spiral' can occur which depletes other valued resources (e.g. Hakanen et al., 2008). In this context, it seems that colleague support, in particular, is especially valued by nurses (Spooner-Lane, 2004).

Finally, this thesis has a number of methodological contributions in the HRM and occupational health psychology domain. Throughout the three studies, structural equation modelling was employed to test the three mediation models. This is a particular strength of this thesis given that empirical evidence demonstrates that structural equation modeling is superior than regression when testing mediation hypotheses (e.g. Iacobucci et al., 2007). The real strength of SEM is that it is possible to specify and estimate more complicated path

models with intervening variables between the independent and dependent variables (Hox & Bechger, 1998). In Study 2, a time lagged research design was employed to investigate the mediating role of P-O fit in the relationship between employees' perceptions of HIWPs and burnout. This is important, as theoretically speaking, it is believed that it may take some time for resources to influence well-being outcomes (Halbesleben et al., 2014). Also, according to Halbesleben et al. (2014), most studies testing COR theory have utilised cross-sectional studies which can limit our ability to determine causal relationships or even chronological order. Measuring resources and outcomes at the same time can sometimes spuriously increase the relationships between variables (Sanchez & Viswesvaran, 1996). The problem regarding the limited number of time lagged and longitudinal research designs is particularly relevant to burnout. Indeed, Maslach et al. (2001) highlighted the importance of such designs to studying burnout because it is an outcome believed to develop over time. Also, in the wider HRM literature, it has been noted that very few time lagged and longitudinal studies exist that test the effect of HIWPs on well-being outcomes (Van de Voorde et al., 2012) as this amounts to what Wall and Wood (2005) refer to as 'big science' research. The fact that this thesis incorporates a time lagged study enables the author to shed light on the salience of the methodological approach when investigating the HIWPs and burnout link and particularly to understand whether HIWPs impacts burnout over a longer period of time. Indeed, the results suggest that HIWPs can directly reduce burnout (as found in Study 1) but when considering burnout over a longer time period, other factors must occur in order to realise the positive effects (as found in Study 2). Study 3 allowed the researcher to test the simultaneous role of procedural justice and role overload as mediators in the HIWPs - burnout link. Focusing specifically on nurses, it allowed for testing whether organisational factors (HIWPs) influenced burnout among a specific profession which is believed to score especially high in terms of burnout (Aiken et al., 2002; Felton, 1998). Therefore, biases surrounding

confounding facts impacting the results are somewhat mitigated. Moreover, in this study, the simultaneous role of a job demand and a resource was considered thus seeing two parallel paths in the HIWPs-well-being link rather than only one which was the case in the first two studies. Study 1 and Study 2 in this study only looked at either the role of job demands or resources in this link. In Study 3, it was also possible to decipher whether a multilevel model exists. In other words, it was possible to test the extent to which hospital level differences in perceived HIWPs explained differences in burnout. The ICC(1) was .08 and the ICC(2) was .65 for the overall measure of HIWPs. This suggests that there was sufficient evidence to aggregate HIWPs to the organisational level. Nevertheless, the amount of variability at this level is rather small and most variability seems to occur at the individual level of analysis. This points to the fact that HIWPs should be measured at the individual level instead of or as well as at the organisation level. As noted by Wright and Boswell (2002), a large number of studies in HRM assume invariability between organisations in prior research. However, this may be short-sighted because in line with the compelling arguments of Bowen and Ostroff (2004), individuals even within the same organisation, can respond differently to HR practices. This individual variability in HR perceptions can occur as a result of differences in the implementation of HR practices by line managers (Nishii & Wright, 2008). It can also occur due to the fact that individuals have different cognitive schemas for processing information regarding HR practices (Wright & Haggerty, 2005). Therefore, overall it is reasonable to suggest that another valuable contribution of the present thesis is that individuals' perceptions of HIWPs are considered across the three studies. Relying on employees to rate HIWPs rather than supervisors or HR managers is also beneficial because the resulting score is deemed by some to be more reliable (Kehoe & Wright, 2010). This is largely due to measurement error which is mitigated when a large number of responses are captured (i.e. employees) as opposed to one or a few responses (i.e. from line managers or the

HR manager) (Heavey et al., 2013) and because research demonstrates that HR managers are prone to overstating the extent of HR practice implementation in organisations (Kehoe & Wright, 2010). Indeed, as argued by Guest (2011), "It is naive to assume that a senior HR manager can provide information about local practice either in terms of whether the practices are implemented or whether they are effective"(p. 10).

5.3 Limitations and Directions for Future Research

Although this thesis sought to thoroughly investigate the impact of employees' perceptions of HIWPs on burnout and the mediating role of demands and resources, it is not without its limitations. First, Study 1 and Study 3 used a cross-sectional research design. Therefore, the possibility of determining the direction of causality is severely limited. For example, it is possible that burned out employees appraise their environment as more demanding and therefore burnout can influence perceptions of job demands rather than vice versa (Jenkins & Elliot, 2004). Also, Study 2 used a time lagged research design which represents a particular strength given the paucity of time lagged research designs in the HR field (Van de Voorde et al., 2012). That said, three waves of data collection would be better as it provide a way to assess nonlinear relations (i.e. reverse causation) rather than only a linear relation with two waves of data collection (Cole & Maxwell, 2003). Therefore, longitudinal research designs should be pursued in future research examining the HIWPs and well-being relationship. Research designs of this nature may in fact be necessary to truly capture processes which are governed by COR theory (e.g. Halbesleben et al., 2014). Second, as all the variables in the three presented studies in this thesis were based on self-reported measures, there is an increased risk of common method bias. Nevertheless, as this thesis was interested in perceived HIWPs rather than intended HIWPs, employees perceptions are believed to be the

appropriate source of measurement (Bowen & Ostroff, 2004; Nishii & Wright, 2008) and this is consistent with other research conducted in hospitals (Veld et al., 2010). Indeed, HR managers may represent the best source to rate intended HR practices but less so on implemented or perceived HR practices. As indicated above, higher levels of measurement error may also be present when relying on information from one source such as employees' managers or HR managers (Heavey et al., 2013). With respect to job demands and resources, as well as burnout, employees are also the only individuals who can rate these outcomes thus suggesting that common method bias is less likely to be a problem (Chan, 2009). Moreover, it's important to note that the three conducted studies in this thesis were mediation models. As discussed in Rupp and Spencer (2006), no mediator should appear when a study's results are based entirely on common method bias. In other words, because the majority of relationships between HIWPs and burnout reduced when controlling for job demands and resources, it can be inferred that common method bias is not the only explanation for the relationships reported. Despite these arguments, as a precaution, the three presented studies tested for common method bias using the CFA marker technique advocated by Podsakoff et al. (2012). The results revealed that common method variance was not a serious problem in the three presented studies. Third, although Study 3 represents a particular advantage by considering perceptions of HIWPs at the individual level of analysis (even though there was a large number of hospitals), it would be interesting in future research to test a multilevel model whereby the level of the ward rather than the individual is considered (Veld et al., 2010). Such data at the ward level was not available in order to carry out this investigation as part of the thesis. Future research would therefore benefit by analysing the impact of HIWPs at the ward level and their impact on employees job demands, resources and burnout. Such variation at the ward level is likely to exist because of differences in intended and perceived HIWPs at this level (Nishii & Wright, 2008). Indeed, supervisors are responsible for

implementing HR practices in hospitals (Hutchinson & Purcell, 2010) and they are responsible for deciding whether HIWPs get implemented or not and their level of skill and capabilities influence the overall implementation process (e.g. Baptiste, 2008). In this regard, future research might also assess the role of supervisors in the enactment of HR practices to explain variation at the organisation or ward level. Another limitation of this thesis was the absence of hospital performance outcomes albeit the impact on performance was not in line with the overall research objectives. However, future research might include performance metrics in addition to well-being outcomes. In this way it will be possible to contribute to the wider debate in the HR field regarding the extent to which a 'mutual gains', 'conflicting outcomes' or 'counteracting' perspective better explains the causal link in the HIWPs-well-being-performance relationship (Wood et al., 2012) in the health care sector. However, it is probably uncertain as to whether this debate can be resolved in the health care sector given the very distal and complex nature of hospital performance outcomes which are influenced by individual patient, societal and environmental factors. Nevertheless, the outcome of burnout is considered by many in health care as a key performance outcome in itself, perhaps due to its proven strong association with the quality of patient care delivered (e.g. Felton, 1998). Finally, another possible limitation of this thesis is that it did not investigate the boundary conditions of the HIWPs and burnout link. Indeed, it reasonable to assume that HIWPs may not deliver such positive outcomes as found in this thesis in all circumstances (Edwards & Wright, 2001). Therefore, future research should investigate the conditions under which HIWPs will or will not produce its intended effects on employee well-being outcomes (Butts et al., 2009; Peccei et al., 2013).

5.4 Practical Implications

The implications of the three studies in this thesis indicate that hospital managers should not be overly concerned regarding the possible negative effects of HIWPs on employees' well-being (e.g. Harley et al., 2007). Although it is true that in some cases HIWPs have the potential to induce insecurity and intensification among employees which have health impairment consequences (Wood et al., 2012), no evidence for this contention is found in this thesis. Instead, consistent with COR theory (Hobfoll, 1989), managers should focus on providing the resources associated with HIWPs (empowerment, information sharing, non-monetary recognition and development practices) as they represent instrumental support mechanisms to enhance other resources (P-O fit and procedural justice) and alleviate demands (role conflict, role overload and role ambiguity). The enhanced resources (P-O fit and procedural justice) and lower demands (role conflict and role overload in this case) ultimately lead to lower levels of self-reported burnout. As the results indicate that HIWPs work through these underlying mechanisms, this suggests an avenue where hospital managers should target in order to ensure the desired effects of HIWPs actually occur. Hospitals are likely to benefit by putting mechanisms in place which allow unit managers to better understand these links between HIWPs and well-being (Leggat, Bartram, Casimir & Stanton, 2010). It is plausible to suggest that alleviating burnout by implementing HIWPs and paying attention to these issues is likely to have a profound effect on hospital performance outcomes. Indeed, research shows that reducing burnout is associated with higher levels of organisational citizenship behaviour (OCB) in health care (Gilbert et al., 2010) and better patient outcomes (e.g. Wood & Killion, 2007). Therefore, leaders in health care should be focusing on ensuring effective HR systems are in place and are considered as a critical ingredient of health service reform (Leggat et al., 2011). Given that burnout has been shown to influence the quality of patient care that is delivered (Altum, 2002), any intervention

designed to reduce its prevalence represents an important and worthwhile endeavour (Shirom, 2010; Le Blanc et al., 2007). More generally, the beneficial effects of HIWPs should be recognised by governments and organisations on a wide scale as "burnout is likely to represent a pressing social problem in the years to come" (Shirom, 2010, p. 71).

5.5 Conclusion

This thesis examined the impact of employees' perceptions of HIWPs on burnout in the health care sector in Canada. Applying the important yet novel COR theory as an overarching theoretical framework, a number of research models were tested among 545 health employees in a cross-sectional study, 185 employees in a time lagged study and 2,174 nurses across 105 hospitals. The results from the SEM analyses demonstrate the direct but mainly indirect effect of perceptions of HIWPs on burnout via job demands and resources. Overall, the findings of this research demonstrate that HIWPs have positive health effects for employees (i.e. lower burnout). However, the effects of HIWPs are transmitted indirectly via relevant job demands and resources that bear relevance in this context. The support found for the proposed models provides guidance to hospital managers regarding the benefits and practical working of HIWPs and offers scholars a wide range of future research directions to confirm these results and specifically to examine a more holistic perspective that encompasses a wider range of demands and resources and other contextual or boundary conditions that can enhance or impede the effectiveness of HIWPs.

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Appendix A: Sample Questionnaire for Study 1 and Study 2

WEST ISLAND HSSC

INSTRUCTIONS

- Please circle your answer using a pen**.**
- The word **« organization »** refers to the West Island HSSC.
- The expression **« direct supervisor »** refers to the general manager (administration) of your unit or department.
- Please note that some of the questions will seem to repeat themselves. This is intentional.

SECTION 1: ORGANIZATIONAL COMMITMENT AND INTENTION TO QUIT

1.1 Organizational commitment

		Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
1.	I am proud that I am part of this organization.	1	2	3	4	5	6	7
2.	I feel that I have too few options to consider leaving this organization.	1	2	3	4	5	6	7
3.	I feel like « part of the family » at my organization.	1	2	3	4	5	6	7
4.	I would not want to leave my organization because it would be too costly for me (in regard to different aspects).	1	2	3	4	5	6	7
5.	I feel « emotionally attached » to this organization.	1	2	3	4	5	6	7
6.	I continue to work for this organization because of the scarcity of available alternatives.	1	2	3	4	5	6	7
7.	I feel a strong sense of belonging to my organization.	1	2	3	4	5	6	7
8.	One of the major reasons I continue to work for this organization is that another organization may not match the overall benefits that I have here.	1	2	3	4	5	6	7
9.	My organization has a great deal of personal meaning for me.	1	2	3	4	5	6	7
10.	I do not have any other choice than to stay with this organization.	1	2	3	4	5	6	7
11.	I really feel as if this organization's problems are my own.	1	2	3	4	5	6	7
12.	For me, leaving this organization would bring much more disadvantages than advantages.	1	2	3	4	5	6	7

1.2 Intention to quit

		Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
13.	I often consider leaving my organization.	1	2	3	4	5	6	7
14.	It is possible that I look for a job in another organization	1	2	3	4	5	6	7
15.	It is possible that I quit my organization before next year.	1	2	3	4	5	6	7
16.	If I was offered a job with similar conditions elsewhere, I would most likely take it.	1	2	3	4	5	6	7

SECTION 2 : PERFORMANCE BEHAVIORS

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
17. I invest much more efforts in my work than what is expected of me.	1	2	3	4	5	6	7
18. I try to change how my job is executed in order to be more effective.	1	2	3	4	5	6	7
19. I voluntarily participate to different social activities organized by my department or the organization.	1	2	3	4	5	6	7
20. I help a colleague who has heavy workload.	1	2	3	4	5	6	7
21. I talk about my organization in positive terms outside of work.	1	2	3	4	5	6	7
22. I am active in department affairs.	1	2	3	4	5	6	7
23. I try to institute new work methods that are more effective for the organization.	1	2	3	4	5	6	7
24. I refrain myself from contributing to a conversation when other employees talk negatively of the organization.	1	2	3	4	5	6	7
25. The way I accomplish my tasks surpasses what the organization expects of me in terms of performance at work.	1	2	3	4	5	6	7
26. I defend the organization when other employees criticize it.	1	2	3	4	5	6	7
27. I help a colleague who has work-related problems.	1	2	3	4	5	6	7
28. I try to implement solutions to pressing organizational problems.	1	2	3	4	5	6	7
29. I attend meetings that are not mandatory, but are considered important by the organization.	1	2	3	4	5	6	7
30. I take time to listen to a colleague when he is going through a difficult time.	1	2	3	4	5	6	7
31. I voluntary accomplish some tasks that are **not specified** in my job description.	1	2	3	4	5	6	7

SECTION 3 : INDIVIDUAL WELL-BEING

3.1 Impact of your health on your work

32. Were you hindered by health problems at your work over the past two (2) weeks? (Please check one of the two boxes)	☐	No, not at all → go to question 40
	☐	Yes, to a degree → go to question 33

Over the past two (2) weeks, I did go to work, but as a result of health problems…	**(almost) never**	sometimes	often	**(almost) always**
33. I had a problem concentrating.	1	2	3	4
34. I had to work at a slower pace.	1	2	3	4
35. I had to seclude myself.	1	2	3	4
36. I found decision-making more difficult.	1	2	3	4
37. I had to put off some of my work.	1	2	3	4
38. I had to let others take over some of my work.	1	2	3	4

39. How many extra hours would you have to work to catch up on tasks you were unable to complete in normal working hours due to health problems over the past two weeks?

Note : Do *not* count the days on which you reported sick. _____ hours

3.2 Impact of your work on your health

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
40. I feel emotionally drained from my work.	1	2	3	4	5	6	7
41. I have become less enthusiastic about my work.	1	2	3	4	5	6	7
42. I feel tired when I get up in the morning and have to face another day on the job.	1	2	3	4	5	6	7
43. I have become more cynical about whether my work contributes anything.	1	2	3	4	5	6	7
44. I feel burned out from my work.	1	2	3	4	5	6	7
45. I have become less interested in my work since I started this job.	1	2	3	4	5	6	7
46. I feel used up at the end of the workday.	1	2	3	4	5	6	7
47. I just want to do my job and not be bothered.	1	2	3	4	5	6	7
48. Working all day is really a strain for me.	1	2	3	4	5	6	7
49. I doubt the significance of my work.	1	2	3	4	5	6	7

Over <u>the past twelve (12) months</u>…	**Never**	A few times per year		A few times per month			**A few times per week**
50. I suffered from sleep disorders (e.g.: difficulty to fall asleep, I woke up earlier that I would like and I had difficulty to fall back asleep).	1	2	3	4	5	6	7
51. I had problems with my appetite (i.e. diminution or absence).	1	2	3	4	5	6	7
52. I had health problems (e.g.: respirator, cardiovascular, enteric, musculoskeletal and skin problems, headaches).	1	2	3	4	5	6	7

3.3 Stress at work

Over <u>the past twelve (12) months</u>…	**Never**	A few times per year		A few times per month			**A few times per week**
53. How often have you felt nervous and stressed at work?	1	2	3	4	5	6	7
54. How often have you felt difficulties at work were pilling up so high that you could not overcome them?	1	2	3	4	5	6	7
55. How often have you felt frustrated because of work problems?	1	2	3	4	5	6	7

SECTION 4 : SOCIAL CLIMATE

4.1 Work climate

In my organization…		**Strongly disagree**	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
56.	Interactions between individuals are hostile.	1	2	3	4	5	6	7
57.	Individuals are often scheming in secret.	1	2	3	4	5	6	7
58.	There is a lot of antipathy between individuals.	1	2	3	4	5	6	7
59.	Individuals often place obstacles in each other's way.	1	2	3	4	5	6	7

4.2 Support at work

The last three statements refer to doctors. **If you have no direct contact with doctors, please circle NA** (Not applicable)**.**		Not applicable	**Strongly disagree**	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
60.	My organization goes out of its way to do things to make my work life easier for me.		1	2	3	4	5	6	7
61.	My organization would help me if I had a problem at work.		1	2	3	4	5	6	7
62.	My organization would be willing to listen to my personal problems.		1	2	3	4	5	6	7
63.	My direct supervisor goes out of his way to do things to make my work life easier for me.		1	2	3	4	5	6	7
64.	My direct supervisor would help me if I had a problem at work.		1	2	3	4	5	6	7
65.	My direct supervisor would be willing to listen to my personal problems.		1	2	3	4	5	6	7
66.	My colleagues go out of their way to do things to make my work life easier for me.		1	2	3	4	5	6	7
67.	My colleagues would help me if I had a problem at work.		1	2	3	4	5	6	7
68.	My colleagues would be willing to listen to my personal problems.		1	2	3	4	5	6	7
69.	Doctors go out of their way to do things to make my work life easier for me.	NA	1	2	3	4	5	6	7
70.	Doctors would help me if I had a problem at work.	NA	1	2	3	4	5	6	7
71.	Doctors would be willing to listen to my personal problems.	NA	1	2	3	4	5	6	7

4.3 Recognition at work

The last six statements refer to doctors and beneficiaries. **If you have no direct contact with doctors or beneficiaries, please circle NA** (Not applicable)**.**		Not applicable	**Strongly disagree**	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
72.	My direct supervisor notices the efforts I put into my work.		1	2	3	4	5	6	7
73.	When I accomplish work of great quality, my direct supervisor congratulates me.		1	2	3	4	5	6	7
74.	My direct supervisor shows me his appreciation for the contribution I bring to my workplace.		1	2	3	4	5	6	7
75.	My colleagues notice the efforts I put into my work.		1	2	3	4	5	6	7
76.	When I accomplish work of great quality, my colleagues congratulate me.		1	2	3	4	5	6	7
77.	My colleagues show me their appreciation for the contribution I bring to my workplace.		1	2	3	4	5	6	7
78.	The doctors notice the efforts I put into my work.	NA	1	2	3	4	5	6	7
79.	When I accomplish work of great quality, doctors congratulate me.	NA	1	2	3	4	5	6	7
80.	The doctors show me their appreciation for the contribution I bring to my workplace.	NA	1	2	3	4	5	6	7
81.	The beneficiaries notice the efforts I put into my work upon them.	NA	1	2	3	4	5	6	7
82.	When I accomplish work of great quality upon them, the beneficiaries express to me their gratitude.	NA	1	2	3	4	5	6	7
83.	The beneficiaries show me their appreciation for the contribution I bring to their well-being.	NA	1	2	3	4	5	6	7

4.4 Organizational justice

During the decision-making process…		**Strongly disagree**	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
84.	General managers collect accurate information necessary for making right decisions about employees.	1	2	3	4	5	6	7
85.	The employees are provided opportunities to appeal or challenge a decision made by general managers.	1	2	3	4	5	6	7
86.	General managers make sure to have all sides affected by the decision represented.	1	2	3	4	5	6	7
87.	General managers ensure that decisions are made with consistency by relying on established standards.	1	2	3	4	5	6	7
88.	General managers make sure to hear the concerns of all those that will be affected by a decision.	1	2	3	4	5	6	7
89.	General managers offer reasonable justifications for decisions that affect employees.	1	2	3	4	5	6	7
90.	Requests for clarification or additional information regarding decisions are usually accepted by general managers.	1	2	3	4	5	6	7

SECTION 5 : LEADERSHIP STYLE

My direct supervisor …		**Strongly disagree**	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
91.	Is a model for me to follow, in terms of moral or ethical conduct.	1	2	3	4	5	6	7
92.	Recognizes my achievements.	1	2	3	4	5	6	7
93.	Avoids making decisions.	1	2	3	4	5	6	7
94.	Reacts only to problems that could bring serious consequences.	1	2	3	4	5	6	7
95.	Encourages me to see things from a different angle.	1	2	3	4	5	6	7
96.	Is absent when needed.	1	2	3	4	5	6	7
97.	Focuses on my strengths rather than on my weeknesses.	1	2	3	4	5	6	7
98.	Helps me develop my potential by acting towards me as a coach.	1	2	3	4	5	6	7
99.	Delays responding to my requests.	1	2	3	4	5	6	7
100.	Clarifies his expectations in terms of work performance and how the employees will be rewarded if they reach the performance level expected.	1	2	3	4	5	6	7
101.	Assists employees based on effort.	1	2	3	4	5	6	7
102.	Rewards my accomplishments.	1	2	3	4	5	6	7
103.	Makes me aware of the importance of the organization’s mission.	1	2	3	4	5	6	7
104.	Encourages me to express my ideas and opinions.	1	2	3	4	5	6	7
105.	Reacts to problems if they are frequent or chronic.	1	2	3	4	5	6	7
106.	Stimulates me to look for solutions to complex situations.	1	2	3	4	5	6	7
107.	Talks enthusiastically.	1	2	3	4	5	6	7
108.	Expresses concern about my objectives and helps me to reach them.	1	2	3	4	5	6	7

SECTION 6 : JOB CHARACTERISTICS AND WORK ORGANISATION

6.1 Job characteristics

		Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
109.	The work I do is very important to me.	1	2	3	4	5	6	7
110.	The accomplishment of my tasks can have important consequences for others (e.g. : for my colleagues, my supervisor, the top management, the beneficiaries).	1	2	3	4	5	6	7
111.	I have significant autonomy in determining how I do my job.	1	2	3	4	5	6	7
112.	I am confident about my ability to do my job.	1	2	3	4	5	6	7
113.	My job activities are personally meaningful to me.	1	2	3	4	5	6	7
114.	Because of the work I do, I have a great deal of influence in my workplace (e.g. : on my colleagues, my supervisor, the top management, the beneficiaries).	1	2	3	4	5	6	7
115.	I can decide on my own how to go about doing my work.	1	2	3	4	5	6	7
116.	I am self-assured about my capabilities to perform my work activities.	1	2	3	4	5	6	7
117.	I have considerable opportunity for independence and freedom in how I do my job.	1	2	3	4	5	6	7
118.	The work I do is meaningful to me.	1	2	3	4	5	6	7
119.	I have mastered the skills necessary for my job.	1	2	3	4	5	6	7
120.	The fulfilment of my work tasks enables me to have considerable impact on my work environment (e.g. : on my colleagues, my supervisor, the top management, the beneficiaries).	1	2	3	4	5	6	7
121.	The amount of information I must process, in terms of thinking, to accomplish my job is fairly important.	1	2	3	4	5	6	7
122.	The amount of information I must remember on this job to accomplish my tasks is fairly important.	1	2	3	4	5	6	7
123.	The work I do requires a great deal of concentration.	1	2	3	4	5	6	7
124.	In the context of my work, I have to accomplish or to keep track of more than one activity at once.	1	2	3	4	5	6	7
125.	In the context of my work, I have to solve problems which have no obvious correct answer.	1	2	3	4	5	6	7
126.	In the context of my work, I constantly have to learn new things.	1	2	3	4	5	6	7
127.	My job puts me in emotionally disturbing situations.	1	2	3	4	5	6	7
128.	My job requires me to involve myself emotionally.	1	2	3	4	5	6	7
129.	My job requires me to hide my emotions.	1	2	3	4	5	6	7
130.	My job requires a great deal of muscular strength.	1	2	3	4	5	6	7
131.	My job requires a great deal of physical endurance.	1	2	3	4	5	6	7
132.	My job involves uncomfortable, tiring and/or painful positions or movements.	1	2	3	4	5	6	7

6.2 Work organization

		Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
133.	Almost everyday, I have to work fast in order to accomplish all the tasks assigned to me.	1	2	3	4	5	6	7
134.	The quality of my work depends on the level of cooperation (help) of other employees.	1	2	3	4	5	6	7
135.	I am certain how to go about getting my job done (which approach, procedure or method to use).	1	2	3	4	5	6	7
136.	In the context of my work, I often receive assignments without adequate resources to execute them well.	1	2	3	4	5	6	7
137.	A high level of coordination with other employees is needed to accomplish my tasks properly.	1	2	3	4	5	6	7
138.	After work, I often come home too tired to do some of the things I'd like to do.	1	2	3	4	5	6	7
139.	In my job, I often have to work on things that I find unnecessary.	1	2	3	4	5	6	7
140.	Most of the days, I have to exert extra energy if I want to finish my duties.	1	2	3	4	5	6	7
141.	In the context of my work, I have clear planned objectives to reach.	1	2	3	4	5	6	7
142.	In my job, I often receive incompatible requests from two or more people at the same time.	1	2	3	4	5	6	7
143.	My responsabilities at work are clearly defined.	1	2	3	4	5	6	7
144.	Because my work is demanding, I am often irritable at home.	1	2	3	4	5	6	7
145.	Very often, my job leaves me with little time to get everything done.	1	2	3	4	5	6	7
146.	I am often asked to do things that are against my better judgment.	1	2	3	4	5	6	7
147.	To accomplish my tasks properly, I must consult or refer myself to other employees fairly frequently.	1	2	3	4	5	6	7
148.	I know exactly what is expected of me in terms of performance at work.	1	2	3	4	5	6	7
149.	In the context of my duties, I have to work on a regular basis with two or more groups who operate quite differently.	1	2	3	4	5	6	7
150.	I often feel overloaded and rushed in my job.	1	2	3	4	5	6	7
151.	I often have to buck a rule or policy in order to carry out an assignment.	1	2	3	4	5	6	7
152.	My own performance is dependent on the way others perform their job.	1	2	3	4	5	6	7
153.	My family or friends dislike how often I am preoccupied with my work while I'm at home.	1	2	3	4	5	6	7
154.	I feel certain about how much authority I have.	1	2	3	4	5	6	7
155.	My job takes up time that I would like to dedicate to my personal, family or social life.	1	2	3	4	5	6	7
156.	I consider that the physical conditions of my work environment (e.g.: cleanliness, luminosity, smell, noise, temperature, space) are adequate.	1	2	3	4	5	6	7
157.	I consider that the material resources (e.g.: supplies, tools, equipment, technologies) available meet our needs.	1	2	3	4	5	6	7

SECTION 7 : HUMAN RESOURCES MANAGEMENT PRACTICES

7.1 Development practices

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
158. In our organization, various professional development activities are available to employees (e.g.: coaching, training).	1	2	3	4	5	6	7
159. Training pursued by employees outside of the organization is valued (e.g.: refresher courses, academic or professional diplomas).	1	2	3	4	5	6	7
160. In our organization, we have access to the resources needed to improve our skills (e.g.: time, financial resources, flexibility of work schedule).	1	2	3	4	5	6	7

7.2 Information sharing practices

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
161. The organization usually asks for employees' opinion when it considers adopting new rules, procedures or methods related to the organization of work.	1	2	3	4	5	6	7
162. In general, the organization seeks the employees' collaboration to help it find solutions to problems that directly affect their work.	1	2	3	4	5	6	7
163. The organization strongly incites its employees to communicate new ideas for improving how things operate within the organization.	1	2	3	4	5	6	7
164. The organization provides its employees with timely feedback about the decisions that affect them or have an impact on the work they do.	1	2	3	4	5	6	7
165. Employees are regularly informed about major projects in our organization (e.g. : structural changes, major investments, new technologies).	1	2	3	4	5	6	7
166. Employees usually receive feedback on their suggestions.	1	2	3	4	5	6	7

7.3 Practices regarding non-monetary recognition

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
167. The organization generally congratulates employees for a performance that goes beyond its expectations.	1	2	3	4	5	6	7
168. The organization usually recognizes the extra efforts that employees put into their work.	1	2	3	4	5	6	7
169. Exceptional contributions of employees are formally recognized by the organization (e.g.: during ceremonies or meetings, through the organization's newsletter, by congratulatory letters, with gifts).	1	2	3	4	5	6	7

SECTION 8 : ORGANIZATIONAL CHANGE MANAGEMENT

Statements 170 to 179 refer to your perception regarding organizational change management. **If you were not working for the HSSC when the merger of the four installations occurred, please circle NA** (Not applicable)**.**	Not applicable	**Strongly disagree**	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
170. I have been sufficiently informed in advance of the merger of the four institutions.	NA	1	2	3	4	5	6	7
171. I have been sufficiently informed of the reasons that have brought about the merger.	NA	1	2	3	4	5	6	7
172. I have been sufficiently informed of the impact of the merger on my work.	NA	1	2	3	4	5	6	7
173. I have been given the opportunity to share my preoccupations regarding the changes resulting from the merger.	NA	1	2	3	4	5	6	7
174. I feel that my comments regarding the changes resulting from the merger have been taken into consideration.	NA	1	2	3	4	5	6	7
175. I feel involved in the implementation of the organizational changes.	NA	1	2	3	4	5	6	7
176. I adhere to the objectives of the organizational changes in process.	NA	1	2	3	4	5	6	7
177. I agree to follow through with the implementation of the new ways to operate.	NA	1	2	3	4	5	6	7
178. The changes that have been implemented are beneficial because they improve the organization's overall effectiveness.	NA	1	2	3	4	5	6	7
179. I see some advantages or personal benefits in the merger.	NA	1	2	3	4	5	6	7

SECTION 9 : MISSION, VISION AND ORGANIZATIONAL VALUES

9.1 Mission

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
180. I understand the role that I can play in the accomplishment of the organizational mission.	1	2	3	4	5	6	7
181. I am inspired by the organizational mission.	1	2	3	4	5	6	7
182. What the organization seeks to offer in terms of services to the beneficiairies and the community stimulates me.	1	2	3	4	5	6	7

9.2 Vision

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
183. General managers have a clear vision regarding the goals that we need to reach collectively.	1	2	3	4	5	6	7
184. General managers know precisely which orientation the organization needs to take in the coming years.	1	2	3	4	5	6	7
185. General managers share a common vision of the organization's future.	1	2	3	4	5	6	7

9.3 Organizational values

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
186. High-quality services are a priority for my organization.	1	2	3	4	5	6	7
187. My organization is always looking for new ways to economize resources.	1	2	3	4	5	6	7
188. My organization strongly encourages its employees to be innovative.	1	2	3	4	5	6	7
189. It is very important for my organization to maintain a reputation for quality.	1	2	3	4	5	6	7
190. My organization devotes many efforts to improve the effectiveness of its functioning.	1	2	3	4	5	6	7
191. Cooperation among employees is strongly valued by my organization.	1	2	3	4	5	6	7
192. My organization strongly encourages employees to express minority points of view.	1	2	3	4	5	6	7
193. My organization acknowledges openly to its employees their right to err.	1	2	3	4	5	6	7
194. Improving the quality of its services is a constant preoccupation for my organization.	1	2	3	4	5	6	7
195. My organization strongly emphasizes the respect of rules and procedures.	1	2	3	4	5	6	7
196. Respect among employees (courtesy, consideration, justice, truthfulness, tolerance) is a fundamental value for my organization.	1	2	3	4	5	6	7
197. My organization strongly appreciates the creative side of its employees.	1	2	3	4	5	6	7

9.4 Organizational and personal values congruence

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	**Strongly agree**
198. My personal values “match” or fit exactly the values that my organization considers important.	1	2	3	4	5	6	7
199. General managers and myself grant importance to the same values.	1	2	3	4	5	6	7
200. My personal values coincide precisely with those of the employees that work for the HSSC.	1	2	3	4	5	6	7

SECTION 10 : SOCIO-DEMOGRAPHIC DATA

201. What is your gender?
Man----------1
Woman ----------2

202. How old are you? _____years

203. What is your civil status?
Live alone----------1
Married or common law union ---------2
Single parent----------3

204. How many people are financially dependent on you (including your spouse)? _____

205. How many children under 12 years old are financially dependent on you? _____

206. What is the highest educational degree that you have received? (Please circle only one response)

A secondary or vocational school diploma ---------- 1
A college diploma ---------- 2
An undergraduate university degree ---------- 3
A bachelors degree ---------- 4
A masters degree ---------- 5
A doctoral degree ---------- 6
-Other : _____

207. On average, how many hours do you work a week? _____hrs/week

208. How many hours of overtime have you worked for this organization in the last month? _____hrs/month

209. What is your hourly rate? _____$/hour

210. Do you think that you have reached the top of your salary scale?

Yes ---------- 1
No ---------- 2

211. What is your job status?

Regular full-time employee ---------- 1
Regular part-time employee - 3 days or less /week ---------- 2
- More than 3 days /week ---------- 3
Employee on call ---------- 4

212. To what is your employment status due? (Please check only one response)

To a career choice ---------- 1
To a lack of employment opportunity ---------- 2
To a temporary situation (studies, children…) ---------- 3

213. What is your work schedule?

Day ---------- 1
Evening ---------- 2
Night ---------- 3
Rotation ---------- 4

214. To which category of personnel do you belong?

1. Nursing and cardiorespiratory personnel ---------- 1
(e.g. : nursing assistant, nurse, nurse clinician, respiratory therapist…)
2. Paratechnical, auxiliary service and trade personnel ---------- 2
(e.g. : nurse's aid, kitchen staff, housekeeping, laundry, plumbing, maintenance, carpenter…)
3. Office personnel ---------- 3
(e.g. : secretary, archivist, office clerk, administration technician…)
4. Health and social services technicians ---------- 4
(e.g. : radiology technician, laboratory technician…)
5. Health and social services professionals ---------- 5
(e.g. : psychologist, educator, social worker, dietician, physiotherapist…)
6. Managers and professionals ---------- 6
(e.g. : direct supervisor, general manager, top management, consultant…)

215. For how many years have you been working at your current job? _____ full years + _____ months

216. For how many years have you been working for this organization? _____ full years + _____ months

217. For which type of establishment do you usually or more frequently work? (Please check only one response)

Hospital ---------- 1
CLSC ---------- 2
CHSLD ---------- 3

CONSENT TO CROSS-MATCH RESULTS

Your consent to cross-match results is important because it will allow us to establish a link between your evaluation of the work environment with certain objective health indicators such as motives for absence from work.

We assure you that **no one in your organization will have access to your data.** The latter will be exclusively reserved for the HEC research team which assumes entire responsibility for their confidentiality. Please check to indicate whether or not you accept to have the research team cross-match the following item:

Presence at work YES _____ NO _____

Thank you for you collaboration! HEC Montréal research team.

Appendix B: Sample Questionnaire for Study 3

HEC MONTRÉAL

RESEARCH PROJECT

WELL-BEING AND EXTRA-ROLE BEHAVIOURS OF NURSING PROFESSIONALS

Mister, Miss,

Extra-role behaviours and overall health of employees are sources of great concern in the Quebec healthcare system. A number of stakeholders in the system are currently interested in these questions (Ministry, regional agencies, health care institutions, etc.). Although many agree on the importance of having staff members that demonstrate extra-role behaviours and that are in good health, many wonder which organizational model increases the work satisfaction of all those involved, including the end users.

These are the reasons that have motivated our research team (HEC Montréal) to conduct a large provincial study, mostly with nursing professionals, in different health care organizations (hospital centres, CHSLD, CLSC). In collaboration with the *Fédération des infirmières et des infirmiers du Québec* (F.I.I.Q.), our research team is asking for your participation in this study, which is completely independent. It is important to underline that the value of a research like this depends on your participation: the more nurses that participate, the more the results will be representative of the work environment. Furthermore, even if the F.I.I.Q. has approved this study, you do not need to feel obligated to participate. If you fill out this questionnaire, we will consider that you consent to participating in this study. The confidentiality measures taken will allow you to participate in this research project without prejudice.

You will find attached a questionnaire. This activity should take you approximately 20 minutes. The information obtained will remain completely confidential. No one from your establishment will have access to any of the data obtained. The research team at HEC Montreal is exclusively responsible for this data. Only the aggregate results will be communicated.

In order to thank you for your participation, we will enter all those that will return a questionnaire, along with their coordinates (see details on the publicity attached), into a contest to win a health package of approximately 250$ at a spa in their region.

We thank you for your precious collaboration. Please accept our warmest gratitude.

Denis Chênevert	Geneviève Jourdain	Brigitte Banville
Associate Professor	M.Sc. Student	M.Sc. Student

If you have any questions concerning this research, you can contact the principal researcher, Mr. Denis Chênevert, at (514) 340-6625.

According to the ethical research committee at HEC Montréal, the data collection method linked to this study fulfils the ethical norms for research with human beings. Should you have any questions regarding the ethics of this research, please feel free to contact the ethical research committee at (514) 340-6257.

INSTRUCTIONS

- Please **circle** your answer using a **pen.**
- Please note that some of the questions have been **negatively formulated**.
- Please note that some of the questions will seem to repeat themselves. This is intentional.
- Please base your answers on the **establishment for which you are currently working**. If you are working for numerous establishments, please base your answers on only one, the one where you work **most often**.
- Questions regarding your **direct supervisor**. For those that have more than one supervisor because of rotating work shifts, please base your answers on the supervisor to whom you report to the most frequently.

SECTION 1: PSYCHOLOGICAL CONDITIONS

This section refers to your behaviours and attitudes towards your organization. Please circle the number corresponding to the **degree to which you disagree or agree with each of the following statements.**

1.1 Empowerment

Empowerment refers to the degree of influence and responsibility employees feel they enjoy in their job.	Strongly disagree						Strongly agree
1. I feel that I master the necessary skills to efficiently accomplish my work.	1	2	3	4	5	6	7
2. Accomplishing my tasks leads to important outcomes in my work environment.	1	2	3	4	5	6	7
3. I have enough authority to fulfill the responsibilities assigned to me.	1	2	3	4	5	6	7
4. I consider that my level of expertise is sufficiently adequate to accomplish my tasks.	1	2	3	4	5	6	7
5. I have enough authority to do my job well.	1	2	3	4	5	6	7
6. The work I do is meaningful to me.	1	2	3	4	5	6	7
7. The work that I do has a significant influence on my work environment.	1	2	3	4	5	6	7
8. My job activities are personally meaningful to me.	1	2	3	4	5	6	7
9. I have enough power to accomplish my tasks efficiently.	1	2	3	4	5	6	7
10. The work I do is very important to me.	1	2	3	4	5	6	7
11. The fulfilment of my work tasks enables me to have considerable impact on my work environment.	1	2	3	4	5	6	7
12. I feel that I possess the necessary capabilities to fulfill my tasks properly.	1	2	3	4	5	6	7

1.2 Organizational commitment

	Strongly disagree						Strongly agree
13. I would be very happy to spend the rest of my career in this organization.	1	2	3	4	5	6	7
14. I do NOT have a strong feeling of belonging to this organization.	1	2	3	4	5	6	7
15. This organization really means a lot to me.	1	2	3	4	5	6	7
16. I like my organization because of what it stands for, its values.	1	2	3	4	5	6	7

1.3 Commitment towards the profession

	Strongly disagree						Strongly agree
17. I regret having chosen a career in nursing.	1	2	3	4	5	6	7
18. I am proud to be a nurse.	1	2	3	4	5	6	7
19. I do NOT like being a nurse.	1	2	3	4	5	6	7
20. I am excited at the idea of practicing nursing.	1	2	3	4	5	6	7

1.4 Supportive work environment

	Strongly disagree						Strongly agree
21. My supervisor does NOT care about my opinions.	1	2	3	4	5	6	7
22. I know that I can count on my colleagues if I have a problem.	1	2	3	4	5	6	7
23. The doctors show LITTLE concern for me.	1	2	3	4	5	6	7
24. My supervisor really cares about my well-being.	1	2	3	4	5	6	7
25. My colleagues care about my opinion.	1	2	3	4	5	6	7
26. The doctors with whom I work are really concerned about my well-being.	1	2	3	4	5	6	7
27. If I have a problem, I can get help from my supervisor.	1	2	3	4	5	6	7
28. My colleagues care about my well-being.	1	2	3	4	5	6	7
29. The doctors care about my opinions.	1	2	3	4	5	6	7

1.5 Adherence to change

	Strongly disagree						Strongly agree
30. The methods used to implement the current organizational changes are adequate.	1	2	3	4	5	6	7
31. I adhere to the objectives of the organizational changes in process.	1	2	3	4	5	6	7
32. The role of everyone in the new organizational functioning is clear for all the employees.	1	2	3	4	5	6	7
33. At this point in the implementation, I believe that the new organizational functioning is efficient.	1	2	3	4	5	6	7
34. I agree to follow through with the implementation of the new organizational functioning.	1	2	3	4	5	6	7
35. I do NOT know how to realize the proposed changes; I do not have the necessary materials or resources.	1	2	3	4	5	6	7
36. The current proposed changes are in conflict with my daily obligations at work.	1	2	3	4	5	6	7

1.6 Recognition at work

	Strongly disagree						Strongly agree
37. When I am very productive, my colleagues show their appreciation.	1	2	3	4	5	6	7
38. My direct supervisor congratulates me often for my efforts.	1	2	3	4	5	6	7
39. The recipients often show their satisfaction with the services that I provide to them.	1	2	3	4	5	6	7
40. When I do a really great job, my colleagues show their appreciation.	1	2	3	4	5	6	7
41. The doctors generally recognize my personal contributions.	1	2	3	4	5	6	7
42. When I accomplish work of great quality, my direct supervisor shows me his appreciation.	1	2	3	4	5	6	7
43. My colleagues regularly congratulate me for my efforts.	1	2	3	4	5	6	7
44. I feel that the doctors do NOT recognize my skills..	1	2	3	4	5	6	7
45. I feel that the recipients appreciate the nursing care that I give them.	1	2	3	4	5	6	7
46. When I do a really great job, my direct supervisor gives me recognition.	1	2	3	4	5	6	7
47. The recipients give me LITTLE recognition in regards to the nursing care that I give them	1	2	3	4	5	6	7
48. The doctors usually give me credit for my accomplishments.	1	2	3	4	5	6	7

1.7 Organizational justice

	Strongly disagree						Strongly agree
49. The managers make sure that all employees' concerns are heard before making decisions.	1	2	3	4	5	6	7
50. My direct supervisor is usually honest with me.	1	2	3	4	5	6	7
51. The doctors respect me as a person.	1	2	3	4	5	6	7
52. My direct supervisor treats me with respect and dignity.	1	2	3	4	5	6	7
53. The decisions made by the managers are applied to all employees in the same way.	1	2	3	4	5	6	7
54. The doctors are polite with me.	1	2	3	4	5	6	7
55. My direct supervisor offers reasonable justifications for decisions made about my job.	1	2	3	4	5	6	7
56. The doctors treat me with kindness and consideration.	1	2	3	4	5	6	7
57. Requests for clarification or additional information regarding decisions are usually accepted by the managers.	1	2	3	4	5	6	7
58. My direct supervisor shows concern for my rights as an employee.	1	2	3	4	5	6	7

1.8 Sense of security

Please circle the number indicating **how frequently (from never to daily)** these statements correspond to your situation **in the last twelve (12) months.**	Never			A few times per month			Every day
59. Some doctors are abusive (verbally, psychologically or physically) with me.	1	2	3	4	5	6	7
60. Some patients criticize my nursing care.	1	2	3	4	5	6	7
61. Some of my colleagues are angry or rude with me.	1	2	3	4	5	6	7
62. My direct supervisor is angry or rude with me.	1	2	3	4	5	6	7
63. Some doctors become upset with me for taking too long to do something.	1	2	3	4	5	6	7
64. Some patients use an abusive language or inappropriate gestures with me.	1	2	3	4	5	6	7
65. Some doctors publicly criticize my nursing care.	1	2	3	4	5	6	7
66. Some of my colleagues are abusive (verbally, psychologically or physically) with me.	1	2	3	4	5	6	7
67. Some patients under my care refuse to accept medication or other treatment.	1	2	3	4	5	6	7
68. My direct supervisor is abusive (verbally, psychologically or physically) with me.	1	2	3	4	5	6	7
69. Some of my colleagues publicly criticize my nursing care.	1	2	3	4	5	6	7
70. My direct supervisor publicly criticizes my nursing care.	1	2	3	4	5	6	7

SECTION 2 : INDIVIDUAL WELL-BEING

This section refers to your level of well-being inside your organization.

2.1 Work satisfaction

Please circle the number corresponding to the **degree to which you disagree or agree with each of the following statements.**	Strongly disagree						Strongly agree
71. I am often bored with my job.	1	2	3	4	5	6	7
72. I am satisfied with my job for the time being.	1	2	3	4	5	6	7
73. Most days I am enthusiastic about my work.	1	2	3	4	5	6	7
74. I find real enjoyment in my work.	1	2	3	4	5	6	7

2.2 State of health

Please circle the number indicating **how frequently (from never to daily)** these statements correspond to your situation in **the last twelve (12) months.**	Never			A few times per month			Every day
75. My work leaves me emotionally drained.	1	2	3	4	5	6	7
76. I DON'T feel comfortable in my own skin.	1	2	3	4	5	6	7
77. I suffer from sleep disorders (difficulty to fall asleep, I wake up one or two hours earlier that I would like and I have difficulty to fall back asleep).	1	2	3	4	5	6	7
78. I feel burned out from my work.	1	2	3	4	5	6	7
79. I feel that I treat some recipients as if they were "objects".	1	2	3	4	5	6	7
80. I feel physically exhausted at the end of my workday.	1	2	3	4	5	6	7
81. I have health problems (ex. backaches, headaches, breathing problems, problems with digestion).	1	2	3	4	5	6	7
82. I DON'T really care about what happens to my recipients.	1	2	3	4	5	6	7
83. I feel sad.	1	2	3	4	5	6	7
84. I have problems with my appetite.	1	2	3	4	5	6	7
85. I feel preoccupied, anxious.	1	2	3	4	5	6	7
86. I've become more callous toward people since I took this job.	1	2	3	4	5	6	7
87. I feel stressed, under pressure.	1	2	3	4	5	6	7
88. I feel tired when I get up in the morning and have to face another day on the job.	1	2	3	4	5	6	7
89. I feel depressed or "down".	1	2	3	4	5	6	7
90. I worry that this job is hardening me emotionally.	1	2	3	4	5	6	7

2.3 Intent to quit

Please circle the number corresponding to the **degree to which you disagree or agree with each of the following statements.**	Strongly disagree						Strongly agree
91. I often consider quitting the nursing profession.	1	2	3	4	5	6	7
92. It is possible that I quit my organization before next year.	1	2	3	4	5	6	7
93. It is possible that I look at other career opportunities.	1	2	3	4	5	6	7
94. I often consider leaving my organization.	1	2	3	4	5	6	7
95. It is possible that I look for a job in another organization.	1	2	3	4	5	6	7
96. It is possible that I quit the nursing profession before next year.	1	2	3	4	5	6	7

SECTION 3: PERFORMANCE BEHAVIORS OF MY WORK TEAM

Please circle the number which corresponds to your **evaluation of the proportion <u>of your colleagues</u>** (those with whom you have daily or frequent contact) **who show the following behaviours.**	High Proportion						Low Proportion
97. **Cooperation among colleagues** (ex. help, special favours, mutual encouragement, sharing of resources and skills, sharing of information).	1	2	3	4	5	6	7
98. **Professional conscientiousness** (ex. assiduity, punctuality, respect of schedules).	1	2	3	4	5	6	7
99. **Respect for normal work standards** (ex. accomplish normal tasks assigned, satisfactory performance).	1	2	3	4	5	6	7
100. **Dedication at work** (ex. work harder than the average worker, take on additional responsibilities, volunteer overtime, perform beyond expectations).	1	2	3	4	5	6	7
101. **Agents of change** (ex. make innovative suggestions, take initiatives to change things, suggest solutions to problems).	1	2	3	4	5	6	7
102. **Sportsmanship** (ex. refrain from finger pointing, accept constraints, accent the positive rather than the negative, follow work rules and procedures).	1	2	3	4	5	6	7
103. **Organizational loyalty** (ex. support and defend the organization, speak well of and care about the organization's image)	1	2	3	4	5	6	7
104. **Involvement in social and community life** (ex. active in department affairs, participate in department's social activities, attend meetings).	1	2	3	4	5	6	7
105. **Coordination and courtesy among employees** (ex. reflect and consult others before acting, weigh the consequences of your work on others, coordinate with others).	1	2	3	4	5	6	7
106. **Orientation towards beneficiaries** (ex. strong concern to improve services offered—their quality and timeliness).	1	2	3	4	5	6	7

SECTION 4: HUMAN RESOURCES MANAGEMENT PRACTICES

This section refers to the management practices in your organization. Please circle the number **corresponding to the degree to which you disagree or agree with each of the following statements.**

4.1 Human resources development practices

	Strongly disagree						Strongly agree
107. In our organization, various professional development activities are available to employees (ex. coaching, training).	1	2	3	4	5	6	7
108. Training pursued by employees outside of the organization is valued (ex. refresher courses, academic or professional diplomas).	1	2	3	4	5	6	7
109. In our organization, we have access to the resources needed to improve our skills (ex. time, financial resources, flexibility of work schedule).	1	2	3	4	5	6	7

4.2 Information sharing practices

In this organization...	Strongly disagree						Strongly agree
110. Employees are regularly informed about major projects in our organization. (ex: major investments, new technologies).	1	2	3	4	5	6	7
111. Employees are regularly informed about the new products, programs or services offered by our organization.	1	2	3	4	5	6	7
112. The suggestions made by employees are generally given serious consideration.	1	2	3	4	5	6	7
113. Employees frequently receive feedback on their suggestions.	1	2	3	4	5	6	7
114. The organization regularly seeks the employees' opinions.	1	2	3	4	5	6	7

4.3 Practices regarding non-monetary recognition

	Strongly disagree						Strongly agree
115. Exceptional contributions of employees are frequently recognized by our organization (ex: during ceremonies or meetings, through the organization's newsletter, by congratulatory letters, with gifts) .	1	2	3	4	5	6	7
116. The organization favours and rewards excellence.	1	2	3	4	5	6	7
117. The organization recognizes outstanding contributions with significant gestures.	1	2	3	4	5	6	7
118. My organization generally congratulates employees who surpass expectations.	1	2	3	4	5	6	7

4.4 Salary policies

	Strongly disagree						Strongly agree
119. My salary is fair in comparison to the going market rate for the same type of job.	1	2	3	4	5	6	7
120. My salary is fair in comparison to the salary given for other jobs in this organization.	1	2	3	4	5	6	7
121. My salary is a good reflection of my skills and responsibilities.	1	2	3	4	5	6	7

4.5 Practices of feedback on performance

If there is no performance evaluation system in your organization, please circle **N/A (0)**.	N/A	Strongly disagree						Strongly agree
122. The performance appraisal system used in my organization is appropriate.	0	1	2	3	4	5	6	7
123. During my performance appraisal, my supervisor sets objectives with me for the coming year.	0	1	2	3	4	5	6	7
124. During my performance appraisal, my supervisor suggests ways to help me achieve the objectives that we had fixed.	0	1	2	3	4	5	6	7
125. My supervisor regularly discusses the objectives that had been fixed for me at my last performance appraisal.	0	1	2	3	4	5	6	7

4.6 Work-family life balance

	Strongly disagree						Strongly agree
126. After work, I am too tired to do what I would like to do at home.	1	2	3	4	5	6	7
127. My family life takes time that I would like to spend at work.	1	2	3	4	5	6	7
128. I CAN'T give as much time to my family as I should because of my job.	1	2	3	4	5	6	7
129. I am sometimes ineffective at work because of my demanding family responsibilities.	1	2	3	4	5	6	7
130. My job takes time that I would like to spend with my family.	1	2	3	4	5	6	7
131. My family responsibilities are so big that they sometimes affect my job performance.	1	2	3	4	5	6	7

SECTION 5 : OTHER PERFORMANCE BEHAVIORS

This section refers to the factors that influence the implementation of the management practices existing in your organization. Please circle the number **corresponding to the degree to which you disagree or agree with each of the following statements.**

5.1 Leadership style

My direct supervisor …	Strongly disagree						Strongly agree
132. Is a model for me to follow.	1	2	3	4	5	6	7
133. Stimulates me to look for solutions to complex situations.	1	2	3	4	5	6	7
134. Makes everyone around him/her enthusiastic about assignments.	1	2	3	4	5	6	7
135. Expresses concern about my objectives and helps me reach them.	1	2	3	4	5	6	7
136. Is an inspiration to me.	1	2	3	4	5	6	7
137. Encourages me to see things from a different angle.	1	2	3	4	5	6	7

5.2 Work organization practices

NB: The term team refers to a group of persons working together on a common task and interacting on a regular basis.

In a job like mine …	Strongly disagre						Strongly agree
138. I DON'T need to collaborate with others to perform my tasks.	1	2	3	4	5	6	7
139. I know what my responsibilities are.	1	2	3	4	5	6	7
140. I am often asked to complete tasks that go against my good judgment.	1	2	3	4	5	6	7
141. I am consulted about the way my work is organized.	1	2	3	4	5	6	7
142. My workload leaves me the time and energy to help my colleagues.	1	2	3	4	5	6	7
143. Getting things done requires a high level of coordination among employees.	1	2	3	4	5	6	7
144. Explanation is clear of what has to be done.	1	2	3	4	5	6	7
145. I have to buck a rule or a policy in order to carry out an assignment.	1	2	3	4	5	6	7
146. I often feel rushed or under stress in my job.	1	2	3	4	5	6	7
147. Tasks are organized in such a way that we must work in teams.	1	2	3	4	5	6	7
148. I feel certain about how much authority I have.	1	2	3	4	5	6	7
149. I am consulted about the way my work is to be done.	1	2	3	4	5	6	7
150. I regularly feel overloaded by my work.	1	2	3	4	5	6	7

151. I receive assignments without adequate resources and material to execute them.	1	2	3	4	5	6	7
152. I am consulted about the objectives of my work.	1	2	3	4	5	6	7

5.3 Business values

Evaluate to what extent the following values are **practised in your workplace.**	Strongly disagree						Strongly agree
153. Courtesy, politeness, respect for others.	1	2	3	4	5	6	7
154. Logic, rigour.	1	2	3	4	5	6	7
155. Work/family balance.	1	2	3	4	5	6	7
156. Obedience, respect of hierarchy.	1	2	3	4	5	6	7
157. Leniency, room for mistakes, forgiveness.	1	2	3	4	5	6	7
158. Pleasure, humour.	1	2	3	4	5	6	7
159. Formality, respect for procedures.	1	2	3	4	5	6	7
160. Transparency, honesty.	1	2	3	4	5	6	7
161. Economy of resources, efficiency.	1	2	3	4	5	6	7
162. Respect for differences, divergences.	1	2	3	4	5	6	7
163. Employees' personal health.	1	2	3	4	5	6	7
164. Cooperation, mutual assistance.	1	2	3	4	5	6	7
165. Fairness.	1	2	3	4	5	6	7

SECTION 6: SOCIO-DEMOGRAPHIC DATA

166. What is your gender?
Man---------- 1
Woman---------- 2

167. How old are you? _____years

168. What is your civil status?
Live alone---------- 1
Married or common law union---------- 2
Single parent---------- 3

169. How many people are financially dependent on you (including your spouse) ? _____

170. How many children under 12 years old are financially dependent on you? _____

171. What is the highest educational degree that you have received? (*Please circle only one response*)
A college diploma---------- 1
An undergraduate university degree---------- 2
A bachelors degree---------- 3
A masters degree---------- 4
-Other:_____

172. If you work in a hospital, please answer this question. Otherwise, please go to the next question. In which unit do you work?

Psychiatric nursing---------- 1
Emergency---------- 2
Long-term care---------- 3
Operating room---------- 4
Surgery ---------- 5
Maternity---------- 6
Obstetrics---------- 7
Intensive care---------- 8
Ambulatory care centre---------- 9
General medicine---------- 10
Floating team---------- 11
-Other : _____

173. How many hours of overtime have you worked for <u>this organization</u> in the <u>last month</u>? _____hours

174. What is your job status?

Regular full-time employee---------- 1
Regular part-time employee - 3 days or less/week---------- 2
- More than 3 days /week---------- 3
Employee on call---------- 4

175. To what is your employment status due *(Please check <u>only one response</u>)*?

To a career choice---------- 1
To lack of employment opportunity---------- 2
To a temporary situation (studies, children…)---------- 3

176. What shift do you work?

Day---------- 1
Evening---------- 2
Night---------- 3
Rotating shift - Day/evening---------- 4
Rotating shift - Day/night---------- 5
Rotating shift - Evening/night---------- 6

177. Do you think that you have reached the top of your salary scale?

Yes---------- 1
No---------- 2

178. For how many years have you been working at your current job? _____ years _____months

179. For how many years have you worked for this organization? _____years _____ months

180. For how many years have you been working as a nurse? _____years _____ months

181. Does your current position include supervisory responsibilities?

Yes---------- 1
No---------- 2

182. What is the name of your organization?_____

Your comments would be greatly appreciated (Use the other side of this booklet if needed)

_____

_____

Please insert this booklet in the return envelope provided in order to return the in the information to us as quickly as possible. Thank you very much for your collaboration
The HEC Montréal research team