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Workplace Characteristics, Work-To-Life Conflict, And Psychological Distress Among Medical Workers

Marissa S. Gravelle

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WORKPLACE CHARACTERISTICS, WORK-TO-LIFE CONFLICT, AND
PSYCHOLOGICAL DISTRESS AMONG MEDICAL WORKERS

by

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Bachelor of Science, University of North Dakota, 2010

A Thesis

Submitted to the Graduate Faculty

of the

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in partial fulfillment of the requirements

for the degree of

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This Thesis, submitted by Marissa S. Gravelle in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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This thesis is being submitted by the appointed advisory committee as having met all of the requirements of the Graduate School at the University of North Dakota and is hereby approved.

Wayne Swisher
Dean of the Graduate School

4-24-2012

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Title Workplace Characteristics, Work-to-Life Conflict, and Psychological
 Distress among Medical Workers

Department Sociology

Degree Master of Arts

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TABLE OF CONTENTS

LIST OF FIGURES	v
LIST OF TABLES	vi
ACKNOWLEDGEMENTS	vii
ABSTRACT	viii
CHAPTER	
I. INTRODUCTION.....	1
II. LITERATURE REVIEW.....	7
III. METHOD	21
IV. RESULTS.....	29
V. DISCUSSION	38
REFERENCES	48

LIST OF FIGURES

Figure	Page
1. Conceptual Model of Direct and Indirect Relationships between Workplace Characteristics, Work-to-Life Conflict, and Psychological Distress among Medical Workers.....	11

LIST OF TABLES

Table	Page
1. Descriptive Statistics	30
2. OLS Regression for the Effects of Workplace Characteristics and Work-to-Life Conflict on the Psychological Distress of Medical Workers.....	32
3. OLS Regression for the Effects of Workplace Characteristics on Work-to-Life Conflict for Medical Workers	34

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ABSTRACT

The medical industry is the fastest growing job sector and is projected to be the largest job sector by 2018. This group of workers tends to experience heightened stressors in the workplace. The key purpose of this study was to address whether work-to-life conflict mediates the relationship between workplace characteristics and psychological distress for workers in the medical industry. Drawing on data from the 2002 National Study of the Changing Workforce (N = 329), relationships were explored using stepwise OLS regression analysis. Findings from the first model (which excludes the mediating variable of work-to-life conflict) suggest that as both coworker and supervisor support decrease, psychological distress increases. Model one also suggests that as job pressure increases, psychological distress increases. Model two shows that the relationships between both job pressure and coworker support and psychological distress become non-significant when the work-to-life conflict variable is introduced, suggesting that work-to-life conflict mediates the relationship between both job pressure and coworker support and psychological distress. Findings also show that the direct relationship between supervisor support and psychological distress remained significant with addition of work-to-life conflict. Implications of findings and suggestions for future research are discussed.

CHAPTER I

INTRODUCTION

Overview of Chapter

The purpose of this study is to explore whether the unique work characteristics of medical workers identified by previous scholars contribute to psychological distress among this group. A second purpose is to examine whether work-to-life conflict mediates the relationships between work characteristics and psychological distress for medical workers. Chapter One will first provide a brief introduction to the topic, along with a discussion of the goal of this thesis. A description of medical workers will then be provided, followed by a discussion of what is known about the relationships between workplace characteristics, work-to-life conflict, and psychological distress. The need to address this topic will also be discussed, and an overview of the next four chapters of this thesis will be provided.

Introduction and Goal of Thesis

Previous scholarship has indicated that employees, in general, experience psychological distress as a result of work-to-life conflict in which various workplace demands interfere with personal/family responsibilities (Burke & Greenglass, 1999;

Craig de Silva et al., 2008). It also has been suggested by previous scholars that work-to-life conflict plays a mediating role between work stressors and psychological distress among workers (Escribà-Agüir & Pérez-Hoyos, 2007; Grant-Vallone & Ensher, 2001; Hämmig, Gutzwiller, & Bauer, 2009). Very little research, however, has studied relationships between work stressors, work-to-life conflict, and psychological distress among medical workers. Because the demand for medical workers is on the rise and because they tend to experience heightened stressors as a result of working directly with patients, psychological distress among this population is important to study (Chao, 2011; Rees, 1995; Shackleton, Siegrist, Link, Marceau, & von dem Knesebeck, 2010; Wilhelm, Kovess, Rios-Seidel, & Finch, 2004; Woods, 2009). This is especially the case because the unique experiences medical workers encounter on the job have implications for job burnout, job tenure, and quality of care provided to patients (Blum et al., 2010; Meretoja, 2009). Indeed, previous studies have shown medical workers are at risk of experiencing psychological distress, and identifying mechanisms that contribute to such distress has the potential to address issues of job burnout and quality of care provided by medical workers (Burke & Greenglass; Parikh, Taukari, & Bhattacharya, 2004).

That being said, the goal of this thesis is to determine whether relationships between workplace characteristics, work-to-life conflict, and psychological distress are evident among medical workers. The first step will be to provide an overview of medical workers, along with highlighting the importance of studying psychological distress among this group, by elucidating the heightened work stressors that they encounter (Hämmig et al., 2009).

Overview of Medical Workers

Medical workers, including occupations such as certified nurse assistants, technical workers (e.g. radiology technician), physicians, and nurses, are the focus of this thesis. It has been predicted that in the near future there will be more people with medical needs than there are medical workers to attend to those needs (Dawson, 2012). Further, Woods (2009) projected that the healthcare sector will be the fastest growing sector over the next decade, accounting for over half of the total projected job growth by 2018. Additionally, the aging population, considered to be those 60 years and older, is projected to reach 25 percent of the total population by the year 2050 (Administration on Aging, 2010). As a result, there is a need for more doctors, nurses, and other healthcare workers to account for the increase in medical demands of the elderly while maintaining the ability to attend to the medical needs of the rest of the U.S. population (Anderson, Langemo, & Volden, 2011; Johnson, 2010).

Not only is the demand for medical workers an important reason for studying this group, but they also tend to experience heightened work stressors due to their unique job tasks. For instance, a high level of interaction with patients is an integral part of the job duties of many medical workers. Job tasks range from those requiring physical contact, such as helping patients bathe, eat, dress, and administering medications to cognitive tasks, such as examining and advising patients (Bureau of Labor Statistics, 2011). Of medical occupations, nurse assistants interact the most with patients, especially in nursing home facilities. In fact, they are considered primary caregivers in most medical facilities according to the Bureau of Labor Statistics. Licensed practical nurses and registered nurses are the second and third most likely to interact with patients (Bureau of Labor

Statistics). Depending on the work setting, a nurse and certified nurse assistant will be responsible for caring for up to nine or more patients during a single shift (allnurses.com). Doctors may interact with individual patients very little compared to nurses and nurse assistants; however, most physicians generally spend six to eight hours per work day seeing patients (Santiago, 2012). These high levels of interaction with patients may be a source of stress among medical workers.

Research has shown that medical workers, in general, face stressors in the workplace that many workers in other occupations do not encounter (Rees, 1995). For instance, medical workers typically work long and often non-traditional hours, have high levels of job demands, experience lack of social support in the work setting, and have little control over work and the scheduling of work (Klenier & Pavalko, 2010; Tennant, 2001; Thompson & Prottas, 2005). According to Johnson (2010), more and more job duties are being passed from doctors to nurse practitioners and nurses. As a result, strain resulting from time constraints and psychological stressors has become common among nursing staff (Aiken & Clark, 2001; Blum et al., 2010; Deary et al., 2011; Parikh, et al., 2004). Medical workers also experience high levels of job pressure as a result of working directly with people, many of whom have profound problems, such as terminal illness (Rees, 1995). These workplace stressors have been found to contribute to work-to-life conflict, which can ultimately lead to medical workers experiencing mental health issues (Blum et al., 2010; Chao, 2011; Guerts, Rutte, & Peeters, 1999; Meretoja, 2009). These issues are especially critical due to high levels of job burnout and short job tenure that are evident in the medical industry (Aiken & Sloane, 1997; Bourbonnais, Comeau, & Vézina, 1999; Decker, 1997; Shields & Ward, 2001). Identifying mechanisms contributing to

work-to-life conflict and psychological distress among medical workers may help address these issues.

Research Questions

The underlying research question of this thesis is: does work-to-life conflict matter more than workplace characteristics alone in predicting psychological distress among medical workers? In other words, do workplace characteristics directly impact psychological distress among medical workers or do work characteristics mainly impact psychological distress by increasing work-to-life conflict? Direct relationships between workplace characteristics and psychological distress have been established by past scholars; however, the potential mediating role of work-to-life conflict has been understudied among medical workers. The direct relationships between work characteristics and psychological distress will also be explored in order to lay the foundation for the mediating model. Because medical workers have been shown to experience workplace stressors that workers in many other occupations do not, this research will contribute to the literature by helping to identify mechanisms contributing to psychological distress among a national sample of medical workers in the US ($N = 329$). In doing so, it may be used to help address problems of burnout and job tenure evident among medical workers.

Organization of the Remainder of the Thesis

Chapter One of this thesis introduced and emphasized the importance of studying psychological distress among medical workers by briefly describing some of the unique work characteristics that medical workers experience. Chapter One also highlighted the

usefulness of examining whether work-to-life conflict mediates the relationship between work characteristics and psychological distress among these workers. Chapter Two will introduce the theoretical perspective pertinent to this topic and will also review previous literature regarding the psychological distress of medical workers. Major concepts that are central to this thesis will be defined. To examine relationships between workplace characteristics, work-to-life conflict, and psychological distress among medical workers, a quantitative methodology will be employed, which will be explained in Chapter Three. The results from the statistical analysis will be presented in Chapter Four. Lastly, results will be discussed and related back to previous literature in Chapter Five. Chapter Five will also outline limitations of this thesis and provide suggestions for future research.

CHAPTER II

LITERATURE REVIEW

The objective of this thesis is to explore the relationships between workplace characteristics, work-to-life conflict, and psychological distress among medical workers. More specifically, a theoretical model will be proposed in which work-to-life conflict is expected to mediate the relationships between work characteristics and psychological distress. In this chapter, the conceptual approach guiding this thesis, role theory, will be explained. Previous literature will then be discussed regarding the relationships between the variables. Hypotheses to guide the analyses will also be proposed.

Theoretical Framework

Role Theory

Tiedje and colleagues (1990) described role theory as “viewing [the] energies of individuals as finite and role demands as infinite...[such that] role conflict, then, becomes an inevitable, normal, and expected consequence of multiple roles” (p. 64). The basic premise of role theory is that people occupy many different roles at any given time. As a result, people may find that their roles often conflict with one another. Such role conflict has been described by previous scholars as “a stressful situation that results from discrepant role expectations and from the inability to resolve those incompatible

expectations” (Pomaki, Supeli, & Verhoeven, 2007, p. 317). The experience of role conflict has been connected to negative outcomes, such as depression and anxiety (Parikh et al., 2004; Voydanoff, 2002).

Past scholarship has focused attention on the role conflict that can occur between work and family roles as these two domains are where many adults primarily spend their time (Voydanoff, 2002). Work-to-family conflict, a type of role conflict, occurs when demands within a work role make it difficult for people to meet the expectations and demands of family roles (Hill, 2005). Hämmig, Gutzwiller, and Bauer (2009) pointed out that an important flaw in previous research on work-to-family conflict was the tendency to limit participants to traditional families with a husband, wife, and children living in the home. These authors stressed the importance of including a more comprehensive sample and broadening the concept of work-to-family conflict to encompass other aspects of workers’ personal lives. For the purpose of this study, work-to-family conflict will be referred to as work-to-life conflict to extend beyond the assumption of a traditional family to include those who may be unmarried/unpartnered and/or childless. Work-to-life conflict is defined as occurring when demands at work conflict with demands and responsibilities in one’s personal life.

Work-to-life conflict stems from work stressors and can lead to detrimental outcomes within the personal domain. Because medical workers tend to experience heightened levels of work stress (Burke & Greenglass, 1999), work-to-life conflict may be especially important to understanding their experiences. Such conflict may intensify when certain job stressors are present, such as job pressure and lack of workplace social support (Guerts et al., 1999). Indeed, medical workers may be more at risk than workers

in other occupations of experiencing work-to-life conflict because of their workplace stressors. For instance, medical workers typically work long and nontraditional hours, which in many cases are inflexible and include night and weekend work (Pisarski, 2006). Medical workers also tend to experience high levels of job pressure, as the primary purpose of medical work is to provide and ensure quality of care to patients, including patients who have chronic illnesses or are suffering from other serious health issues (Rees, 1995). These work stressors, along with many others, can impact medical workers' personal lives by making it difficult to plan and coordinate events in their off-work time and by obstructing concentration on personal relationships and events. Theoretically then, work stressors might increase work-to-life conflict which, in turn, could result in negative outcomes for medical workers. In this thesis, the negative outcome of interest is psychological distress.

In sum, job stressors theoretically contribute to work-to-life conflict, which in turn, is thought to lead to increased psychological distress. Medical workers whose excessive work demands may interfere with their personal responsibilities, are likely to feel torn between the two domains. As a result, medical workers are, theoretically, at risk of experiencing heightened levels of psychological distress. Altogether, these propositions are congruent with the key ideas of role theory.

Empirical Background and Conceptualization

Psychological Distress

Psychological distress is often referred to as “psychological well-being” and “employee well-being” (Hughes & Parkes, 2007; Parasuraman & Simmers, 2001; ter

Doest & de Jonge, 2006; Thompson & Prottas, 2005). For the purpose of this thesis, psychological distress will refer to feelings of depression, anxiety, lack of energy, problems sleeping, fatigue, and lack of coping abilities (Grant-Vallone & Ensher, 2001; Schieman & Glavin, 2011).

There are many factors that may contribute to psychological distress among medical workers. Previous scholarship has suggested that the most commonly reported workplace characteristics that contribute to psychological distress among the general working population include job pressure, lack of job autonomy, working long hours, nonstandard work hours, lack of schedule flexibility, and lack of coworker and supervisor support (Escribà-Agüir & Pérez-Hoyos, 2007; Galinsky, Kim, & Bond, 2001; Hämmig, et al., 2009; Hughes & Parkes, 2007; Parasuraman & Simmers, 2001; Pisarski et al., 2006; Rees, 1995; Thompson & Prottas, 2005). Along with the established direct relationships between these workplace characteristics and psychological distress, indirect relationships have also been established, whereby work-to-life conflict mediates the relationship between work characteristics and psychological distress among the general working population (Parasuraman, Purohit, Godshalk, & Beutell, 1996). To date, few studies have explored whether work-to-life conflict mediates the relationship between work characteristics and psychological distress among medical workers. Therefore, a mediating conceptual model is proposed for medical workers in this thesis.

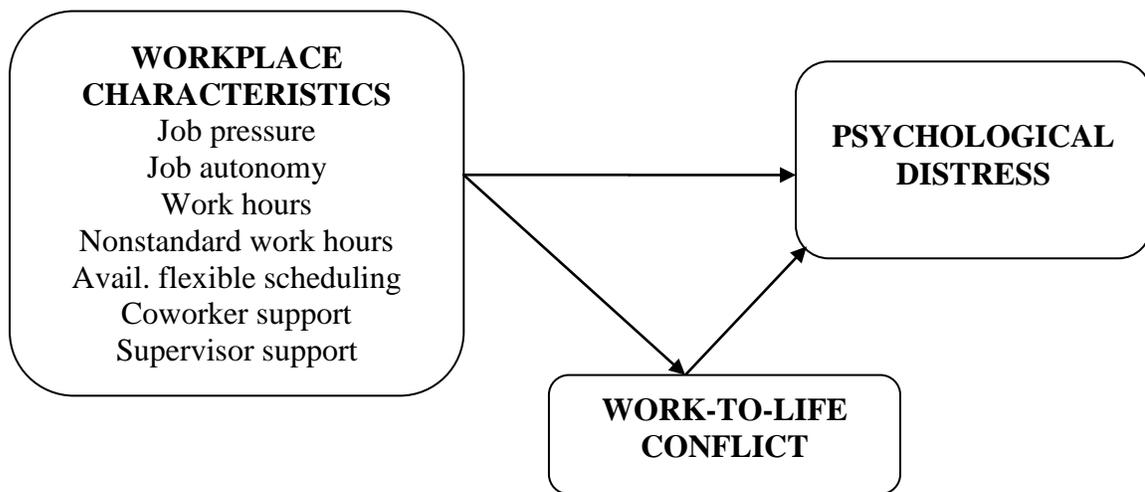


Figure 1. Conceptual Model of Direct and Indirect Relationships between Workplace Characteristics, Work-to-Life Conflict, and Psychological Distress among Medical Workers.

Figure 1 depicts the conceptual model guiding this thesis. The model shows the proposed relationships between workplace characteristics, work-to-life conflict, and psychological distress among medical workers. The model suggests both direct and indirect relationships and work-to-life conflict is posited as a mediating variable between work characteristics and psychological distress. Hypotheses regarding both direct and indirect relationships will be proposed in the next section, and past scholarship regarding the specific relationships between each work characteristic and psychological distress among medical workers will be discussed.

Job Pressure and Psychological Distress

Rees (1995) suggested that medical workers, as a result of working directly with patients, often experience high levels of job pressure. Job pressure has been defined in

previous research in a few different ways. Some researchers have referred to job pressure in terms of job demands and workload and have broken it down into two different types: qualitative workload and quantitative workload (Diestel & Schmidt, 2009; Ilies & Dimotakis, 2010). Qualitative workload refers to task complexity and degree of concentration, whereas quantitative workload refers to time pressure and work volume (Diestel & Schmidt). In this thesis, the term job pressure will be used to refer to a wide range of pressures that include measures of quantitative workload and job demands. More specifically, job pressure will refer to “the degree to which work and time urgency dominate the work milieu” (Fielding & Weaver, 1994, p. 1199).

In general, previous research has found that job pressure is associated with poor mental health, including psychological distress (Diestel & Schmidt, 2009; Ilies & Dimotakis, 2010; Linzer et al., 2002; Rout, 2000). For instance, studies in the United States and in the United Kingdom have shown that job demands were positively associated with psychological distress (Hughes & Parkes, 2007; Ilies & Dimotakis, 2010). The first hypothesis is formulated based on past research.

H₁: Job pressure will be directly and positively related to psychological distress among medical workers.

Job Autonomy and Psychological Distress

Job autonomy has been defined in previous research as “the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling work and in determining the procedures to be used in carrying it out” (Wilson, DeJoy, Vanderberg, Richardson, & McGrath, 2004, p. 572). Having more freedom to

decide how and when one accomplishes work tasks may lead workers to acquire a sense of freedom over their work environment, which might limit psychological distress. As such, it has been well-documented that job autonomy is negatively associated with psychological distress (Escribà-Agüir & Pérez-Hoyos, 2007; Pisarski et al., 2006; Thompson & Prottas, 2005). For instance, in a study conducted in the Netherlands among the general working population, ter Doest and colleagues (2006) found that as job autonomy increased, psychological distress decreased. Similarly, in a study conducted among doctors and nurses in Spain, researchers Escribà-Agüir and Pérez-Hoyos (2007) found that job autonomy was negatively associated with doctors' psychological distress. In keeping with the existing studies, the second hypothesis is proposed.

H₂: Job autonomy will be directly and negatively associated with psychological distress among medical workers.

Work Hours and Psychological Distress

In this thesis the variable work hours refers to the number of hours a respondent works per week. Findings regarding the relationship between work hours and psychological distress have been mixed (Galinsky et al., 2001; Kleiner & Pavalko, 2010). Some studies have found a direct positive relationship between work hours and psychological distress (e.g. Sparks, Cooper, Fried, & Shirom, 1997), and other studies have found an indirect relationship mediated by work-to-life conflict. Hämmig, Gutzwiller, and Bauer (2009), for instance, found that number of work hours was significantly associated with work-to-life conflict, and in turn, work-to-life conflict was significantly associated with psychological distress among Swiss workers. Other studies found that work hours were directly associated with psychological distress among the

general population (Galinsky et al., 2001; Kleiner & Pavalko, 2010). These studies showed that as work hours increased, psychological distress increased. In keeping with these last findings, Hypothesis Three is formulated.

H₃: Work hours will be directly and positively associated with psychological distress among medical workers.

Nonstandard Work Hours and Psychological Distress

Nonstandard work hours refer to timing of work that is not in line with the standard Monday through Friday 8:00 in the morning to 5:00 in the evening time frame (Hughes & Parkes, 2007; Pisarski et al., 2006). Previous research in this area has yielded mixed results. Some studies found that working nonstandard hours was not related to psychological distress (Pisarski et al.), whereas some have found that the relationship between working nonstandard hours and psychological distress was mediated by its positive relationship with work-to-life conflict (Barnett, Gareis, & Brennan, 2008; Hämmig et al., 2009). Other studies have established that working nonstandard hours was positively and directly related to psychological distress (Costa, Sartori, & Åkerstedt, 2006; Galinsky et al., 2001; Kleiner & Pavalko, 2010).

Because medical workers' work schedules are often variable and inflexible (Pisarski et al., 2006), this group may be likely to experience poor mental health due to nonstandard work hours. In keeping with the findings that working nonstandard hours was directly related to poor mental health, Hypothesis Four is proposed.

H₄: Medical workers who work nonstandard hours will have higher levels of psychological distress than those who work standard hours.

Availability of Flexible Scheduling and Psychological Distress

Availability of flexible scheduling has been referred to in previous studies as the extent to which workers are “able to choose, within a range, the hours of their workday” including starting and quitting times (Anderson, Coffey, & Byerly, 2002, p. 789). Flexibility also includes whether workers have the choice to work part time or full time, to work a partial year, and have access to a compressed work week (Minnotte, Cook, & Minnotte, 2010). Costa, Sartori, and Åkerstedt (2006) found that flexibility of work arrangements was one of the most important variables in predicting employee health and well-being. This may be because flexibility allows workers to attend to responsibilities within their personal lives which, in turn, may reduce stress and aid in the maintenance of physical and mental health (Anderson et al., 2002; Costa et al.; Hughes & Parkes, 2007). Because flexibility has been suggested to enhance employee well-being, Hypothesis Five is formulated as follows:

H₅: Availability of flexible scheduling will be directly and negatively related to psychological distress.

Coworker Support, Supervisor Support, and Psychological Distress

Coworker support has been defined by previous studies as “informal social/interpersonal relationships that develop among peers [in the workplace]” (Wilson et al., 2004, p. 571), and a supportive supervisor has been defined as one who “empathizes with the employee’s desire to seek balance between work and family responsibilities” (Thomas & Ganster, 1995, p. 7). Coworker and supervisor support have both been found to be important predictors of psychological distress among many

different types of workers, including doctors and nurses in Spain (Escribà-Agüir & Pérez-Hoyos, 2007; Grant-Vallone & Ensher, 2001).

Coworker support in previous studies has been associated with reduced anxiety and depression (Grant-Vallone & Ensher, 2001; Thompson & Prottas, 2005). For instance, Escribà-Agüir and Pérez-Hoyos (2007) found in a study of medical workers in Spain that lack of coworker support increased the psychological distress of doctors. These authors' findings also showed that supervisor support was negatively related to psychological distress for doctors. In general, research has shown that coworker and supervisor support were negatively related to psychological distress (Escribà-Agüir & Pérez-Hoyos; Grant-Vallone & Ensher; Pisarski et al., 2006; ter Doest & de Jonge, 2006). In line with these findings, the next two hypotheses are formulated.

H₆: Coworker support will be directly and negatively associated with psychological distress among medical workers.

H₇: Supervisor support will be directly and negatively associated with psychological distress among medical workers.

Work-to-Life Conflict and Psychological Distress

Previous research has found that work-to-life conflict is an important predictor of psychological distress. In some cases, work-to-life conflict has been found to be directly associated with psychological distress (Grant-Vallone & Ensher, 2001), and in other cases, it has been found to play a mediating role (Ford et al., 2007; Hughes & Parkes, 2007; Kinnunen, Geurts, & Mauno, 2004), in which work characteristics indirectly influenced psychological distress by increasing work-to-life conflict. Whether the

relationship between work-to-life conflict and psychological distress was direct or mediating, results consistently showed that work-to-life conflict had adverse associations with mental health, including psychological distress.

For instance, studies of workers in the United Kingdom and Switzerland indicated a positive relationship between work-to-life conflict and psychological distress (Hämmig et al., 2009; Hughes & Parkes, 2007). Trends like these were widely supported by other cross-sectional and longitudinal studies among different types of workers (Grant-Vallone & Ensher, 2001; Kinnunen et al., 2004), but research in this area regarding medical workers is limited. Because previous research has found evidence of both a direct relationship and a mediating relationship for other types of workers, two hypotheses will be formulated. A hypothesis predicting an indirect association will be proposed in the next section; but first, a hypothesis predicting the direct association between work-to-life conflict and psychological distress is proposed.

H₈: Work-to-life conflict will be directly and positively associated with psychological distress among medical workers.

Work-to-Life Conflict and Psychological Distress

A Mediating Model

Because some similarities exist regarding the predictors of psychological distress and work-to-life conflict, it is important to pay brief attention to the predictors of work-to-life conflict to gain an understanding of this study's conceptual model. For instance, it has been well-documented that working long hours, working nonstandard hours, lack of schedule flexibility, and job pressure have been positively related to work-to-life conflict

(Anderson et al., 2002; Ford et al., 2007; Kleiner & Pavalko, 2010; Pisarski et al., 2006). Studies have also shown that job autonomy, coworker support, and supervisor support were negatively associated with work-to-life conflict (Haines, Marchand, Rousseau, & Demers, 2008; Thompson & Prottas, 2005; Yildirim & Aycan, 2008). Work-to-life conflict, in turn, has been linked to psychological distress (Chao, 2011; Grant-Vallone & Ensher, 2001).

Past studies strongly support work-to-life conflict as a mediator of relationships between job stressors and individual outcomes (for a review see Voydanoff, 2002). Montgomery, Panagopolou, and Benos (2006) posited that the definition of work-to-life conflict theoretically implies mediation, in that work-to-life conflict “can mediate the way we experience demands over a prolonged period” (p. 204), and because work-to-life conflict cannot occur if the work situation does not contain job demands in the first place (Janssen, Peeters, de Jonge, Houkes, & Tummers, 2004). Hence, work characteristics can be viewed as indirectly impacting psychological distress by either increasing or decreasing work-to-life conflict. Furthermore, the mediating model is theoretically supported by role theory, as its primary assumption centers on role conflict stemming from work stressors contributing to negative outcomes among workers. In keeping with the theoretical approach of this thesis, the following hypothesis is proposed.

H₉: Work-to-life conflict will mediate the relationship between workplace characteristics (job pressure, job autonomy, work hours, nonstandard work hours, availability of flexible scheduling, coworker support, and supervisor support) and psychological distress among medical workers.

Control Variables and Psychological Distress

In addition to the primary independent variables, several control variables have been integrated into the models tested in this thesis. Control variables include age, race, gender, education, household income, presence of children under the age of 18 in the home, and whether respondents held a management position. These variables were chosen because evidence suggests that socio-demographic and household structural factors are germane to the relationships between work and mental health (Haines et al., 2008; Minnotte et al., 2010; Schieman & Glavin, 2011). For example, Haines and colleagues posited that age is important to include as a control variable in work-life research as people experience different work-life challenges across the life course. Race is included as a control variable as different races may experience different stressors in the workplace (Minnotte, 2012b). Gender is controlled for because men and women tend to encounter different experiences in both work and personal life domains and women typically experience greater levels of psychological distress than men (Aycan & Eskin, 2005; Haines et al.; McElwain, Korabik, & Rosin, 2005).

Education is important to include because previous research suggests that those with less education report more psychological distress (Schieman & Glavin, 2011). On a similar note, income is included as a control variable as those with higher income levels may have greater resources to address work-to-life conflict (Schieman & Glavin). Presence of a child under the age of 18 in the home is taken into account because such children may contribute to work-to-life conflict (Minnotte et al., 2010). Whether the respondent held a management position was controlled for as Schieman and Glavin found

that managers tend to experience high levels of work-to-life conflict and psychological distress.

Summary and Overview

In Chapter Two, role theory, which is the theoretical background guiding this research, was explained and linked to the importance of studying psychological distress among medical workers. In addition, previous literature regarding the relationships between the distinctive characteristics that medical workers experience in the workplace and psychological distress was discussed and hypotheses based on past evidence were formulated.

Chapter Three will explain the methodology used to test the proposed hypotheses presented in this chapter. The data set and sample, the methods used to collect the data, and the analytic strategy will be explained. Further detail will be provided regarding the measurement of each variable.

CHAPTER III

METHODOLOGY

The purpose of this study is to explore whether the unique work characteristics identified by previous scholarship contribute to psychological distress among medical workers. A second purpose is to examine whether work-to-life conflict mediates the relationships between work characteristics and psychological distress for this group of workers. To address the proposed research questions and hypotheses a nationally representative secondary data set will be used.

This chapter will first provide a description of the data collection process and the sampling procedure. Next, the measures of psychological distress, work-to-life conflict, workplace characteristics, and control variables will be described. The coding schemes for each variable and scale will be presented. Finally, the analytic strategy will be explained.

Data and Sample

A secondary data set, the 2002 National Study of the Changing Workforce ($N = 3,504$), will be used to analyze relationships between workplace characteristics, work-to-life conflict, and psychological distress for medical workers. The 2002 National Study of the Changing Workforce (NSCW) was initiated by the Families and Work Institute

(Thompson & Prottas, 2005). Measures at the individual level of analysis were obtained via a telephone survey of working adults (aged 18 or over) in the US. A random digit dialing method was used to obtain the sample with a response rate of 52 percent (Thompson & Prottas). Because the population of interest for this study was medical workers, all participants who did not identify as such were eliminated from the analysis, leaving a total of 329 participants.

Measures

Dependent Variable

The dependent variable, *psychological distress*, was measured with five items (Schieman & Glavin, 2011; Voydanoff, 2005). The first three items asked respondents “In the last month, how often have you: 1) Been bothered by minor health problems such as headaches, insomnia, or stomach upsets?; 2) Had trouble sleeping to the point that it affected your performance on and off the job?; and 3) Felt nervous and stressed?” For these items, response choices were “never” (1), “almost never” (2), “sometimes” (3), “fairly often” (4), and “often” (5). The last two items asked respondents, “During the last month have you 4) Been bothered by feeling down, depressed, or hopeless? and 5) Been bothered by little interest or pleasure in doing things?” For these last two items, response choices were “no” (1) or “yes” (5). The coding of these last two items follows the pattern used by Schieman and Glavin and Voydanoff. All of the items were averaged, with higher scores indicating greater levels of psychological distress ($\alpha = .74$).

Independent Variables

Work-to-life conflict was measured with five items (Cook & Minnotte, 2008; Minnotte, 2012b). The response format ranged from “never” (1) to “frequently” (4). The items were: “How often have you not had enough time for your family or other important people in your life because of your job?”; “How often have you not had enough energy to do things with your family or other important people in your life because of your job?”; “How often have you not been in a good mood at home because of your job?”; “How often has work kept you from doing as good a job at home as you could?”; and “How often has your job kept you from concentrating on important things in your family and personal life?” Responses were summed and divided by five for ease of interpretation. Higher scores indicate a higher level of work-to-life conflict, and the scale has an alpha reliability coefficient of .87.

Coworker support was measured with a four-item scale (Cook & Minnotte, 2008; Minnotte, 2012a, 2012b). The items were: “I feel part of the group of the people I work with”; “I have the coworker support I need to do a good job”; “I am treated with respect at work”; and “I have the coworker support I need to manage work/family life”. Responses ranged from “strongly agree” (1) to “strongly disagree” (4). Items were reverse-coded, summed, and averaged such that higher scores indicate higher levels of coworker support ($\alpha = .75$).

Supervisor support was measured with a nine-item scale that has been used by previous researchers (Beutell, 2010; Minnotte, 2012b). Items were: “My supervisor supports me when I have a work problem”; “I feel comfortable bringing up family and

personal matters with my supervisor”; “My supervisor keeps me informed of things I need to do my job well”; “My supervisor has realistic expectations of my job performance”; “My supervisor recognizes when I do a good job”; “My supervisor is fair when responding to employee personal/family needs”; “My supervisor accommodates me when I have family/personal business”; “My supervisor is understanding when I have family/personal business”; and “My supervisor cares about effects of work on personal/family life”. Response categories ranged from “strongly agree” (1) to “strongly disagree” (4). The items were reverse-coded, summed and averaged such that a high score indicates a high level of supervisor support ($\alpha = .90$).

Job autonomy was measured using three items (Minnotte, 2012b; Schieman & Glavin, 2011; Voydanoff, 2005). Participants were asked the extent to which they agreed with the following statements: “I have the freedom to decide what I do on my job”; “It is basically my own responsibility to decide how my job gets done”; and “I have a lot of say about what happens on my job”. The response format ranged from “strongly disagree” (1) to “strongly agree” (4). The scores were summed and averaged with higher scores indicating higher levels of job autonomy ($\alpha = .71$).

Availability of flexible scheduling was measured with four items (Hill, 2005; Minnotte et al., 2010). These items pertained to the flexibility of starting and quitting times, whether the respondent could arrange to work a partial year, whether the respondent could arrange part-time or full-time work, and the option of a compressed work week. Respondents reported whether their work organization provided each of the above flexibility policies and were to choose either “no” (0) or “yes” (1). Responses were counted and summed such that a score of “1” indicated that the respondent had

access to one of the flexible work arrangements and a score of “4” indicated that the respondent had access to all four of the flexible work arrangements.

Job pressure was measured using a three-item scale that has been widely used in past research (Schieman & Glavin, 2011; Voydanoff, 2004, 2005). The items were as follows: “My job requires that I work very fast”; “I never have enough time to get everything done on my job”; and “My job requires that I work very hard”. Responses ranged from “strongly agree” (1) to “strongly disagree” (4). The items were reverse-coded, summed, and averaged with higher scores indicating more pressure. The scale has an alpha reliability coefficient of .62.

Nonstandard work hours was measured with one item that assessed whether participants worked a standard Monday through Friday day shift (coded “0”) or another type of shift that is not a regular day shift (coded “1”). *Work hours* was measured in terms of the number of hours respondents worked per week at all jobs.

Control Variables

The control variables integrated into the models were management position, at least one child under 18 living in the home, age, gender, race, household income, and education. The variable pertaining to whether the respondent was in a *management position* was coded as a dummy variable for which “0” meant that the participant was not in a management position, and “1” meant that the participant was in a management position. The variable regarding whether the respondent had *at least one child under the age of 18 in the home* was coded as a dummy variable for which “0” meant that the participant did not have at least one child under 18 years of age living in the home, and

“1” meant that the participant had at least one child under the age of 18 years of age living in the home.

Age was measured in years. Gender and race were coded as dummy variables. In terms of *gender*, men were coded as “1” and women were coded as “0”. To code *race*, whites were coded “1” and all other racial groups were coded as “0”. Household income and education were measured at the ordinal level. Respondents’ *household income* was organized into 3 groups: (1) less than or equal to \$27,999, (2) \$28,000-\$79,999, and (3) greater than or equal to \$80,000. For the *education* variable, respondents were to choose the highest level of education they completed with the following choices: less than a high school degree (1), a high school degree or GED (2), completed some college (3), obtained a bachelor’s degree (4), or obtained a post-graduate degree (5).

Analytic Strategy

One purpose of this thesis is to explore direct relationships between workplace characteristics and psychological distress among medical workers. A second purpose is to address whether work-to-life conflict mediates the relationship between workplace characteristics (job pressure, job autonomy, work hours, nonstandard work hours, coworker support, supervisor support, and availability of flexible scheduling,) and psychological distress among this group of workers. Hypotheses were formulated to address direct relationships between workplace characteristics and psychological distress, and to address the proposed mediating relationship of work-to-family conflict between workplace characteristics and psychological distress.

In order to analyze these hypotheses a quantitative analytic strategy will be employed in which univariate and multivariate analyses will be conducted. First, descriptive statistics will be presented to provide a summary of the sample and all variables. Second, a stepwise ordinary least squares (OLS) regression with mean substitution analysis (to retain missing cases) will be used to test the hypotheses. This allowed 109 missing cases to be retained. The analysis will test Model 1, which depicts the direct relationships between job pressure, job autonomy, work hours, nonstandard work hours, availability of flexible scheduling, coworker support, supervisor support, the control variables, and psychological distress. Next, the analysis will test Model 2, which depicts indirect relationships between the workplace characteristics listed above and psychological distress. The key difference in the second model is the addition of the work-to-life conflict variable, the proposed mediating variable. Model 2 will test for mediation effects.

In order to establish mediation, four requirements must be met (Baron & Kenny, 1986). The first requirement will be met as long as the independent variables (job pressure, job autonomy, work hours, nonstandard work hours, availability of flexible scheduling, coworker support, supervisor support,) are significantly related to the mediating variable (work-to-life conflict). This will be shown by performing a separate analysis in which the workplace characteristics will be regressed on work-to-life conflict. The second requirement will be met if the significant relationships between workplace characteristics and psychological distress in the first model become less significant or non-significant in the second “mediation” model once work-to-life conflict is taken into account. The third requirement will be met if the mediating variable and the dependent

variable yield a significant relationship. The final requirement will be met if there is a significant increase in the percentage of variance explained by the independent variables with the addition of the mediating variable. If all four requirements of mediation are achieved, the mediation hypothesis will be supported (Baron & Kenny).

Summary and Overview of Next Chapter

In Chapter Three, the data and sample, measurement of variables, and analytic strategy were described. In the next chapter the descriptive statistics and the results from the OLS regression analysis will be presented.

CHAPTER IV

RESULTS

This thesis examines direct and indirect relationships between workplace characteristics, work-to-life conflict, and psychological distress among medical workers. A secondary data set, the 2002 NSCW ($N = 329$), was used to explore the following research questions: 1) do workplace characteristics directly impact psychological distress among medical workers? or 2) do workplace characteristics mainly impact psychological distress by increasing work-to-life conflict among medical workers? To answer these research questions, results from the OLS regression analysis will be discussed in this chapter, following the presentation of the descriptive statistics.

Descriptive Statistics

Descriptive statistics for the variables are shown in Table 1. On average medical workers reported working 43.61 hours per week ($SD = 14.58$), and 37% reported working nonstandard hours. The average age of medical workers in the sample was 43 years ($SD = 13.39$), with 75% of the sample consisting of women and 25% of the sample consisting of men. Forty-six percent of respondents reported being in a management position and 48% reported having at least one child under the age of 18 living in the home. In terms of race, the majority of respondents (79%) were white and 21% were non-white. The mean for household income was 2.05 ($SD = .68$), which means that on average respondents reported a household income between \$28,000 and \$79,999. The mean for education was 3.16 ($SD = 1.05$), which means that on average respondents' highest level

of educational attainment was some college. Medical workers reported moderate to fairly high levels of job pressure, with a mean of 2.93 ($SD = .74$) on a scale ranging from 1 (low) to 4 (high). Respondents reported having moderate to fairly high levels of job autonomy, with a mean of 3.05 ($SD = .75$) on a scale of 1 (low) to 4 (high). Availability of flexible scheduling had a mean of 2.01 ($SD = .66$), indicating that respondents reported that at least two flexible scheduling opportunities were available at their work organization. The means for coworker support and supervisor support were 3.48 ($SD = .62$) and 3.34 ($SD = .67$) respectively, on a scale ranging from 1 (low) to 4 (high). Overall, the means suggest that respondents reported moderate to fairly high levels of coworker support and supervisor support. Medical workers reported moderate levels of work-to-life conflict, as the mean was 2.52 ($SD = .89$) on a scale ranging from 1 (low) to 5 (high). The majority of medical workers reported low to moderate levels of psychological distress, with a mean of 2.28 ($SD = 1.00$) on a scale of 1 (low) to 5 (high).

Table 1. *Descriptive Statistics* (N = 329)

Variables	<i>M</i>	<i>SD</i>	<i>Scale Range</i>
Psychological distress	2.28	1.00	1 - 5
Work-to-life conflict	2.52	.89	1 - 5
Job pressure	2.93	.74	1 - 4
Job autonomy	3.05	.75	1 - 4
Work hours	43.61	14.58	
Nonstandard hours ^a	.37		
Availability of flexible scheduling	2.01	.66	1 - 4

Table 1. *Descriptive Statistics (Continued)*

Variables	<i>M</i>	<i>SD</i>	<i>Scale Range</i>
Coworker support	3.48	.62	1 - 4
Supervisor support	3.34	.67	1 - 4
Age	43.01	13.39	
Race ^b	.79		
Gender ^c	.25		
Manager ^d	.46		
Child under 18 ^e	.48		
Education	3.16	1.05	
Household income	2.05	.68	

^aNonstandard hours is a dummy variable coded 1 if the respondent works nonstandard hours at their job. ^bRace is a dummy variable that was coded 1 if the respondent is white and 0 if the respondent is non-white. ^cGender is a dummy variable coded 0 if the respondent is female and 1 if male. ^dManager is a dummy variable coded 0 if the respondent is not a manager and 1 if respondent is a manager. ^eChild under 18 is a dummy variable coded 1 if respondent has a child under the 18 living in the home and 0 if not.

Regression Results

Model 1: Direct Relationships

A stepwise OLS regression analysis was performed to assess whether direct relationships exist between workplace characteristics (job pressure, job autonomy, work hours, nonstandard work hours, availability of flexible scheduling, coworker support, and supervisor support) and psychological distress, and then to assess whether relationships between workplace characteristics and psychological distress change when work-to-family conflict is added to the analysis.

Table 2. *OLS Regression for the Effects of Workplace Characteristics and Work-to-Life Conflict on the Psychological Distress of Medical Workers (N = 329)*

Variables	Model 1			Model 2		
	<i>B</i>	<i>SEB</i>	β	<i>B</i>	<i>SEB</i>	β
Work-to-life conflict	-	-	-	.431***	.065	.383
Job pressure	.206**	.074	.152	.060	.073	.044
Job autonomy	-.104	.075	-.078	-.081	.071	-.061
Work hours	.003	.004	.037	-.002	.004	-.031
Nonstandard hours	-.117	.107	-.057	-.064	.101	-.031
Availability of flexible scheduling	.067	.227	.016	.142	.213	.033
Coworker support	-.209*	.097	-.128	-.091	.093	-.055
Supervisor support	-.371***	.097	-.227	-.257**	.093	-.157
Age	-.010*	.004	-.136	-.007	.004	-.096
Race	.361**	.131	.148	.289*	.124	.118
Gender	-.256*	.124	-.112	-.251*	.116	-.096
Manager	-.102	.123	-.051	-.158	.116	-.079
Child under 18	-.193	.109	-.097	-.244*	.102	-.122
Education	-.051	.059	-.054	-.059	.056	-.062
Household income	-.116	.090	-.076	-.108	.084	-.071
R^2	.176			.275		
Change in R^2	-			.097		
<i>F</i> for model	6.00***			9.27***		
<i>F</i> for change in R^2	-			43.67***		

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 2 displays the results from this analysis. The results show that approximately 18% of the variance in psychological distress was explained by the independent variables in the first model that examines the direct relationships.

Before results of the proposed hypotheses are discussed it is important to note that a few control variables—race, gender, and age—were significantly associated with psychological distress in the first model. Race was positively associated with psychological distress among medical workers ($\beta = .148, p < .01$). This means that whites reported experiencing higher levels of psychological distress than non-whites. Results showed a direct negative relationship between gender and psychological distress ($\beta = -.112, p < .05$), such that women reported experiencing higher levels of psychological distress compared to men. Additionally, results revealed that a negative relationship exists between age and psychological distress ($\beta = -.136, p < .05$).

To test the first seven hypotheses, psychological distress was regressed on job pressure, job autonomy, work hours, nonstandard work hours, availability of flexible scheduling, coworker support, supervisor support, and the control variables. Hypothesis 1 stated that job pressure will be directly and positively associated with psychological distress. The results support this hypothesis, as there is a significant positive relationship between job pressure and psychological distress ($\beta = .152, p < .01$). Hypotheses 2, which stated that job autonomy will be directly and negatively associated with psychological distress among medical workers, was not supported. Hypothesis 3 posited that work hours will be directly and positively associated with psychological distress for medical workers. This hypothesis was not supported. Results revealed that Hypothesis 4, which stated that medical workers who work nonstandard hours will have higher levels of

psychological distress than those who work standard hours, was also not supported. Hypothesis 5 stated that availability of flexible scheduling will be directly and negatively related to psychological distress among medical workers. This hypothesis was not supported. Results suggest that Hypothesis 6, which posited that coworker support will be directly and negatively associated with psychological distress among medical workers, was supported, as there was a direct and negative relationship between coworker support and psychological distress ($\beta = -.128, p < .05$). Hypothesis 7, which stated that supervisor support will be directly and negatively associated with psychological distress among medical workers, was also supported, as there was a direct, negative relationship between supervisor support and psychological distress ($\beta = -.227, p < .001$).

Model 2: Mediating Model

Model 2 represents relationships between work characteristics and psychological distress with the addition of the mediating variable of work-to-life conflict. Before continuing with the discussion of mediating relationships, it is important to note that whether the respondent had at least one child under the age of 18 living in the home was not significant in Model 1, but became significantly and negatively associated with psychological distress ($\beta = -.244, p < .05$) in Model 2, once work-to-life conflict was added to the model.

As mentioned in Chapter 3, there are a few requirements that are needed to establish mediating relationships. First, significant relationships between the independent variables (job pressure, job autonomy, work hours, nonstandard work hours, availability of flexible scheduling coworker support, and supervisor support) and the mediating

variable (work-to-life conflict) must be established. In order to fulfill this requirement, work-to-life conflict was regressed on the workplace characteristics. Results from this regression analysis are depicted in Table 3.

Table 3. *OLS Regression for the Effects of Workplace Characteristics on Work-to-Life Conflict for Medical Workers (N = 329)*

Variables	<i>B</i>	<i>SEB</i>	β
Job pressure	.339***	.060	.282
Job autonomy	-.053	.061	-.045
Work hours	.011***	.003	.179
Nonstandard hours	-.123	.087	-.067
Availability of flexible scheduling	-.175	.184	-.046
Coworker support	-.275***	.079	-.189
Supervisor support	-.263***	.079	-.181
Race	.169	.107	.078
Age	-.008*	.003	-.122
Gender	-.010	.101	-.005
Child under 18	.118	.088	.067
Manager	.131	.100	.073
Education	.019	.048	.022
Household income	-.018	.073	-.013
R^2	.341		

* $p < .05$, ** $p < .01$, *** $p < .001$

A positive association was found between job pressure and work-to-life conflict ($\beta = .282, p < .001$). Additionally, coworker support was negatively associated with work-to-life conflict ($\beta = -.189, p < .001$), and supervisor support was negatively

associated with work-to-life conflict ($\beta = -.181, p < .001$). Thus, the first requirement in establishing mediation was partially met.

The second condition in establishing mediation requires that relationships that were significant in Model 1 become non-significant in Model 2. Because job pressure, coworker support, and supervisor support were the only three independent variables that were significantly associated with psychological distress in Model 1, these three variables are required to become non-significant in Model 2. Once work-to-life conflict was added to the model, the relationship between coworker support and psychological distress ($\beta = -.055, n.s.$), and job pressure and psychological distress ($\beta = .044, n.s.$) became non-significant. Supervisor support, on the other hand, remained significant once work-to-life conflict was added to the model ($\beta = -.157, p < .01$). Hypothesis 9, which stated that work-to-life conflict will mediate the relationship between the workplace characteristics (job pressure, job autonomy, work hours, nonstandard work hours, availability of flexible scheduling, coworker support, and supervisor support) and psychological distress among medical workers, was partially supported. Altogether, the findings revealed that relationships between job pressure, coworker support, and psychological distress were mediated by work-to-life conflict.

A third requirement in establishing mediation calls for a significant relationship between the mediating variable (work-to-life conflict) and the dependent variable (psychological distress). This requirement was fulfilled as the results revealed that a direct positive relationship existed between work-to-life conflict and psychological distress among medical workers ($\beta = .383, p < .001$). This finding also supports

Hypothesis 8, which posited that work-to-life conflict will be directly and positively associated with psychological distress among medical workers.

The final requirement in establishing mediation called for a significant increase in the explained variance when the mediating variable is added to the analysis. Table 2 shows the results from Model 2. The results indicated that 28% of the variance in psychological distress is explained by the independent variables including work-to-life conflict. Further, findings from Model 2 showed a .097 unit increase in the R^2 , and this increase was statistically significant ($p < .001$). Thus, this requirement was met.

Summary and Overview

In this chapter the results of the analysis exploring the direct and indirect relationships between workplace characteristics, work-to-family conflict, and psychological distress among medical workers were presented. A direct positive significant relationship was found between job pressure and psychological distress among medical workers, along with direct negative relationships between coworker support, supervisor support, and psychological distress. Additionally, partial support for the mediating model was shown.

The results will be further discussed in Chapter Five. Connections of the results to role theory and previous literature will also be made. Limitations of this thesis and suggestions for future research will also be presented in Chapter Five.

CHAPTER V

DISCUSSION

The overarching purpose of this thesis was to investigate the extent to which workplace characteristics and work-to-life conflict were related to psychological distress among medical workers. Medical workers were the focus of this thesis because they tend to experience heightened job stressors that contribute to work-to-life conflict and psychological distress. Data from the 2002 NSCW were used to address two research questions: 1) do workplace characteristics directly impact psychological distress among medical workers?; or 2) do workplace characteristics mainly impact psychological distress by impacting work-to-life conflict among medical workers? More specifically, the first research question sought to confirm direct relationships between work characteristics and psychological distress among medical workers that have already been largely established by previous scholarship. The second research question sought to establish a mediating model in which it was predicted that workplace characteristics mainly impact psychological distress by impacting work-to-life conflict among medical workers.

This chapter will summarize and discuss the results of this thesis. In doing so, the findings will be tied to role theory and past literature regarding psychological distress among medical workers. Limitations of this thesis will then be discussed along with suggestions for future research. Finally, a conclusion will be provided that will briefly

summarize the findings of this thesis along with discussing the overall contribution to the larger body of literature.

Discussion of Results: Direct Relationships

Control Variables and Psychological Distress

Before discussing direct relationships between workplace characteristics and psychological distress, it is important to discuss the significant control variables. Results suggested that race was associated with psychological distress among medical workers, with whites being more likely to experience psychological distress. This finding is surprising as past literature has shown that non-whites tend to experience higher levels of psychological distress than whites (Ulbrich, Warheit, & Zimmerman, 1989). Whites may be more likely to experience psychological distress because medical workers who are white may be more likely to be in high status positions, which may bring about greater levels of job stress and psychological distress (Bratter & Eschbach, 2005). The findings also suggested that younger medical workers experience higher levels of psychological distress. It has been shown that young workers in general tend to experience heightened levels of job stress and psychological distress (Cheng, Guo, & Yeh, 2001; Jorm et al., 2005). One potential explanation for this finding is that young medical workers who are new to the workforce experience heightened levels of psychological distress due to lack of experience in the workforce (Coomber & Barriball, 2007; McKenna, Smith, Poole, & Coverdale, 2002). Indeed, Peisah and colleagues (2009) found that older workers attributed their lower levels of psychological distress (compared to younger workers) to experience gained and lessons learned throughout their years in the workforce.

The final control variable that was directly and significantly associated with psychological distress was gender. Results revealed that women medical workers experience significantly higher levels of psychological distress than men. This finding is consistent with past studies that have indicated that women are more likely to experience psychological distress than men, often due to juggling multiple roles which in many cases involves the traditional homemaker/caregiver role (Burke & Greenglass, 1999; Marks, 1998).

Lastly, whether the respondent had at least one child under the age of 18 living in the home was not significantly associated with psychological distress in Model 1, but became significantly and negatively associated with psychological distress in Model 2. Medical workers who have children in the home may experience low levels of psychological distress overall, even in the face of work-to-life conflict. According to Marks (1998), the care-giving role can contribute to one's overall sense of purpose, which may help to override the stressors associated with psychological distress due to work-to-life conflict.

Workplace Characteristics and Psychological Distress

The results of this thesis showed direct relationships between job pressure, coworker support, supervisor support, and psychological distress among medical workers. Past research also indicated that job pressure was positively associated with psychological distress, and that coworker support and supervisor support were negatively associated with psychological distress (Escribà-Aguir & Pérez-Hoyos, 2007; Hughes & Parkes, 2007; Pisarski et al., 2006; Rees, 1995). Researchers have suggested that

supervisor support has a main effect on psychological distress, which is in line with the finding that supervisor support was directly associated with psychological distress, even after work-to-life conflict was added to the model (Yildirim & Aycan, 2008). Supervisor support is so crucial that past research has even suggested that the well-being of employees and their families may be largely impacted by their immediate supervisors, as they are often considered gatekeepers in the ability to rearrange work schedules and can either enhance or detract from workers' attempts to balance work and family responsibilities (Rodgers & Rodgers, 1989). Clearly, supervisor support is a key element in maintaining a positive work environment, and the absence of it may contribute to heightened levels of psychological distress.

The thesis also revealed unexpected findings. Work hours, nonstandard hours, job autonomy, and availability of flexible scheduling were not significantly associated with psychological distress. In support of the finding that work hours and nonstandard work hours were not directly associated with psychological distress, Gareis and Barnett found that work hours and scheduling were not directly related to the psychological distress of women doctors. It may be the case that medical workers who work long hours and/or nonstandard hours prefer to do so or come to see it as an expectation that is not problematic. Additionally, those who prefer working long and/or nonstandard hours may view work as more important than other aspects of their lives. Because of these preferences, psychological distress may not result from working long hours and nonstandard hours. It may also be the case that work hours was not directly associated with psychological distress because work hours may impact psychological distress by impacting other nonwork-related stressors (Gareis & Barnett). In other words, work

hours may interfere with personal responsibilities, which in turn, may lead to psychological distress.

A similar explanation may be provided for the finding that availability of flexible scheduling was not significantly associated with psychological distress. This finding is unexpected as past scholarship has suggested that schedule flexibility is beneficial to employees, especially in managing work and personal life demands (Dubois, McKee, & Nolte, 2006). Lack of support for this finding may be due, at least in part, to the role that nonwork-related stressors play in the relationship between availability of flexible scheduling and psychological distress. For example, availability of flexible scheduling may be more important for a medical worker who has high levels of stress stemming from their personal life. A medical worker who has elder care responsibilities, for instance, may express greater need to have access to flexible scheduling to be able to manage those family responsibilities. Therefore, the finding that flexible scheduling was not associated with psychological distress for medical workers may be due, in part, to not taking into account non-work stressors, such as marital issues and elder care responsibilities, that availability of flexible scheduling may help address.

Job autonomy was also not significantly associated with psychological distress. This finding is consistent with some past research. Guerts, Rutte, and Peeters (1999), in a study of resident doctors, found no relationship between job autonomy and psychological distress. Job autonomy may decrease stress by giving medical workers more control; however, workers with high levels of job autonomy may also hold very stressful jobs. In other words, the benefits gained by high levels of job autonomy may be cancelled out by the stress inherent in these jobs.

Discussion of Mediating Relationships

The results suggested that work-to-life conflict partially mediated the relationships between workplace characteristics and psychological distress for medical workers. This finding reinforces Voydanoff's (2002) support for the model of work-to-life conflict as a mediator of relationships between workplace characteristics and individual outcomes, such as psychological distress. Other scholars have offered support to the finding that work-to-life conflict acts as a mediator between work characteristics and psychological distress among medical workers (Guerts et al., 1999; Montgomery et al., 2006). Specifically, these authors found that work-to-life conflict mediated the relationships between job pressure and coworker support and psychological distress among doctors, as job pressure and coworker support impacted psychological distress by influencing work-to-life conflict.

The results of this thesis also suggested that job pressure and coworker support impacted psychological distress among medical workers by influencing work-to-life conflict. These findings are further supported by studies conducted by Burke and Greenglass (1999) and Farahat (2009) in which work-to-life conflict was one of the most important concerns among medical workers. Greenglass found that nurses who experienced high levels of work-to-life conflict, in turn, experienced greater levels of psychological distress and job burnout. It was suggested by these authors then, that work-to-life conflict acts as a mediator between work characteristics and psychological distress. The results of this thesis suggested that heightened levels of job pressure and lack of coworker support primarily increased psychological distress due to the outcomes of such pressure and lack of support on the workers' work-to-life conflict.

In line with role theory, the findings of this thesis suggest that medical workers experience role conflict, specifically work-to-life conflict, which in turn, contributes to psychological distress. For the medical workers in the sample work-to-life conflict mediated the relationships between job pressure and coworker support and psychological distress. This finding suggests that experiences at work, such as high levels of job pressure and lack of coworker support, may deplete psychological resources available for personal relationships and events and can potentially heighten levels of psychological distress, as suggested by Burke and Greenglass (2001) and Escribà-Agüir and Pérez-Hoyos (2007).

Implications

The main contribution of this thesis is the finding that work-to-life conflict partially mediates the relationship between job pressure and coworker support and psychological distress among medical workers. Appropriate action should be taken to reduce such conflict between work and personal life demands in order to potentially reduce issues of job burnout and to increase quality of patient care. Both individuals and organizations should make changes to cope with issues relating to work-to-life conflict and psychological distress (Geurts et al., 1999; Janssen et al., 2004).

Medical workers and medical facilities both stand to benefit from policies that promote formal and informal workplace social support. Findings from this study indicated that enhancing supervisor support and coworker support might be especially helpful. In juggling work and personal life demands, it is beneficial for workers to have support from their coworkers and supervisors. Medical facilities should implement

policies to encourage a positive work environment that is conducive to personal life demands. Perhaps more closely monitoring relationships between supervisors and employees would help ensure that these relationships are supportive. To potentially improve relationships among coworkers, informal workplace practices may be especially helpful. For instance, perhaps organizing potlucks, picnics, and/or celebrations of other events at the workplace would help improve supportiveness by providing an opportunity for workers to interact and converse with one another in an informal manner. As a result, employees may develop new relationships and strengthen ties with their coworkers.

Additionally, medical facilities should implement policies and practices that reduce job pressure, for example, hiring more people to carry out tasks that are often the responsibility of one person. Hiring more employees to help out with patient care and administrative tasks could help ease medical workers' feelings of high pressure on the job due to working very fast and very hard, along with not having enough time to get things done on the job. Efforts to reduce work-to-life conflict should also be implemented. As previously mentioned, closer monitoring of relationships between workers and supervisors may reduce informal that workers experience in using family-friendly policies. This may be especially helpful if medical workers do not utilize available flexible policies due to fear of such informal reprimands from supervisors (Thompson et al., 1999). Another possibility for employers to consider in reducing work-to-life conflict and psychological distress for medical workers may be to move beyond simply implementing formal organizational policies. It may be more important for employers to work toward employing informal actions to change the norms and culture of the workplace. As a result, the workplace, overall, may be more supportive of workers who

need to tend to personal responsibilities. Perhaps the most important benefit for medical facilities as a result of work-to-life conflict reduction may be a decline in employees' job burnout and intentions to quit and improvement in the quality of care provided by their employees. Reducing work-to-life conflict may help address the unique stressors experienced by medical workers, which may enhance the quality of care they provide and increase job tenure.

Limitations

A few limitations of this thesis should be noted. First, because the design of the study was cross-sectional, direction and causality cannot be established. Second, because psychological distress was a global measure, it is unclear which specific types of psychological distress were experienced by medical workers, which may complicate the process of improving situations for these workers. Lastly, although quantitative research has many strengths, qualitative research, such as conducting interviews and engaging in observation of workplace practices, could offer further insight into the unique work stressors experienced by medical workers.

Suggestions for Future Research

Because conflict between work and personal life is bi-directional, future research should include antecedents and consequences of life-to-work conflict, in which demands from the personal life domain conflict with demands from the work domain. Although it has been well-documented that conflict from the work domain to the personal life domain is more common and a better predictor of poor personal and professional outcomes, life-to-work conflict should not be ignored as it may have detrimental effects on work

performance and psychological distress (Parikh et al., 2004). Including other organizational (e.g. availability of other “family-friendly” policies) and individual level (e.g. personality characteristics) factors that influence psychological distress among medical workers should also be included in future research. These other factors may have further implications for psychological distress among medical workers.

Conclusion

This thesis analyzed the relationships between work characteristics, work-to-life conflict, and psychological distress among medical workers. Because the demand for medical workers is on the rise and because they tend to experience heightened stressors as a result of working directly with patients, psychological distress among this population is crucial to study. Ultimately, heightened levels of psychological distress experienced by medical workers may have implications for job tenure, job burnout, and the quality of care provided to patients. This is especially important as the medical industry continues to grow and because the demand for medical workers and patient care increases with the rapidly expanding aging population.

The primary contribution of this thesis to the literature is the finding that job pressure and coworker support impacted psychological distress by increasing work-to-life conflict. The findings emphasize the importance of improving work conditions of medical workers in order to reduce psychological distress and work-to-life conflict. Altogether, the findings in this thesis have implications for improving job tenure, job burnout, and quality of care for patients.

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