AN EXAMINATION OF FACTORS RELATED TO BURNOUT AMONG MENTAL HEALTH NURSES

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An Examination of Factors Related to Burnout among Mental Health Nurses

By

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Abstract

This cross-sectional study was designed to test a model of burnout among mental health nurses employed in a psychiatric hospital in Atlantic Canada. The model included the variables job satisfaction, role ambiguity, role conflict, workload, social support, perception of personal safety, age, education, work experience, and the three dimensions of burnout: emotional exhaustion, depersonalization, and personal accomplishment. The sample consisted of 115 registered nurses and licensed practical nurses.

The rate of burnout within the sample was 8.1%, although more than 40.0% of the sample reported high levels of emotional exhaustion, or depersonalization, or low levels of personal accomplishment. Nearly half of the participants reported high levels of concern for their personal safety in the workplace. Bivariate analyses demonstrated significant correlations between a number of the study variables. Multiple linear regressions indicated that job satisfaction, role conflict, and workload were the best predictors of the three dimensions of burnout. Specifically, role conflict was a significant predictor of all three dimensions of burnout, while job satisfaction was a significant predictor of emotional exhaustion and personal accomplishment, and workload was a significant predictor of depersonalization and personal accomplishment. The perception of personal safety was significantly correlated with all three dimensions of burnout, job satisfaction, role conflict, role ambiguity, workload, and social support, but it was not found to be a significant predictor in the model of burnout used in this research.

The results of this study have implications for nursing practice, education, theory, and research. At a time when the nursing profession in Canada is aging and experiencing

mass retirement, this research provides relevant information for the prevention of burnout among mental health nurses that can improve the retention of experienced nurses and the recruitment of new nurses.

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Chapter 1

Introduction

The nursing profession is known to be both demanding and stressful, and mental health nursing is considered to be a uniquely arduous speciality. Working with a challenging and unpredictable patient population, for whom a full recovery is unlikely, can create work stressors that are not typically experienced in other nursing specialities (Jenkins & Elliott, 2004). The unique challenges of providing care in a setting where there is an increased risk to an employee's personal safety can be an additional stressor (Arnetz, Arnetz, & Soderman, 1998; Ito, Eisen, Sederer, Yamada, & Tachimori, 2001; Needham, Abderhalden, Dassen, Haug, & Fischer, 2004). With all these stressors inherent to mental health care, the mental health nurse can be more susceptible to the phenomenon known as burnout, compared to nurses in other domains (Happell, Martin, & Pinikahana, 2003; Leiter & Harvie, 1996). Research that adds to the understanding of the precursors of burnout among mental health nurses can yield significant benefits for the specialty and the entire profession. Unfortunately, there is a paucity of existing research on burnout that focuses specifically on mental health nurses working in the psychiatric hospital setting.

Studies on burnout have shown that a number of organizational and individual characteristics, including job satisfaction, role ambiguity, role conflict, workload, social support, age, education, and work experience are correlated with burnout within a number of different occupations, including teachers (Schwab & Iwanicki, 1982), police officers (Kop, Euwema, & Schaufeli, 1999), social workers (Cohen & Gagin, 2005;

Daley, 1979), respiratory care practitioners (Shelledy, Mikles, May, & Youtsey, 1992), psychiatrists (Benbow & Jolley, 2002), and nurses (Burke, 2003; Leiter, 1988; Leiter & Maslach, 1988; Melchior, Bours, Schmitz, & Wittich, 1997). Addressing specific organizational problems and reducing or eliminating certain work stressors may possibly reduce or prevent the development of burnout in mental health nurses. Such a result could aid in the retention of experienced mental health nurses and encourage the recruitment of new staff.

This research tests a model of burnout among mental health nurses that includes the best-known predictors and correlates of burnout and introduces the perception of personal safety as a possible predictor. The results of this research will add to the understanding of the predictors of burnout in mental health nurses, yielding useful information for mental health nurses, nurse managers, administrators, and nurse educators.

Background

It is generally accepted that mental health nursing is a stressful occupation. Working with a distressed and unpredictable patient population can be difficult. Atypical interactions with patients, the uncertainty of a complete recovery by clients, and the potential for physical violence directed toward staff are emotionally demanding aspects of mental health nursing. These adverse working conditions can create occupational stressors that, over time, may take a toll on the mental and physical well-being of the mental health nurse (Arnetz, Arnetz, & Soderman, 1998; Coffey, 1999; Edwards,

Burnard, Coyle, Fothergill, & Hannigan, 2000b; Toppinen-Tanner, Ojajarvi, Vaananen, Kalimo, & Jappinen, 2005). In response to occupational stress, mental health nurses may develop emotional exhaustion, begin to depersonalize the clients, and doubt their ability to perform effectively in their work role. When experienced together, emotional exhaustion, the depersonalization of the clients, and the perception of a decreasing sense of effectiveness at work comprises the phenomenon known as burnout (Maslach, Schaufeli, & Leiter, 2001).

Burnout, considered to be "... a prolonged response to chronic emotional and interpersonal stressors on the job ..." (Maslach, Schaufeli, & Leiter, 2001, p. 397), has been shown to be related to employee illness, absenteeism, and increases in employee turnover (Cameron, Horsburgh, & Armstrong-Stassen, 1994; Carson et al., 1996; Gray-Toft & Anderson, 1981; Toppinen-Tanner, Ojajarvi, Vaananen, Kalimo, & Jappinen, 2005). These consequences of burnout have significant costs for the mental health care system and may be at the root of such diverse organizational problems as decreased productivity due to staff conflict and recruitment and retention issues (Deary, Watson, & Hogston, 2003). Burnout among nursing staff can also have detrimental effects on the patients (Vahey, Aiken, Sloane, Clarke, & Vargas, 2004).

In Newfoundland and Labrador, burnout among nursing staff may result in significant financial costs for hospitals. For example, a recent organizational assessment conducted by the Hay Health Care Consulting Group (Hay Group) reported that the former Health Care Corporation of St. John's (HCCSJ) had the unfortunate distinction of leading comparable national health care institutions in employee illness and sick leave use (2002, p.49). Specifically, for the 2004-2005 fiscal year, the former HCCSJ attributed

nearly $11.5 million of its $400 million operating budget to covering sick leave. Examining the human resource data more closely reveals that when sick leave is expressed as a percentage of annual payroll expenditure, sick time represents 4.36 % of the total yearly payroll disbursement for the Corporation (M. Meaney, personal communication, April, 2005). As research on burnout in nurses has previously demonstrated a correlation between burnout and the use of sick leave (Carson et al., 1996; Firth & Britton, 1989), an improved understanding of the working conditions that precipitate burnout in mental health nurses, and efforts to eliminate them, could save the local health care corporation significant funds.

The complexity of the burnout phenomenon as well as the organizational and personal outcomes of the phenomenon warrants research that examines the predictors of burnout in mental health nurses. This study identifies eight of the best-known predictors and correlates of burnout in employees from a variety of occupations and examines whether these variables are predictors of burnout in mental health nurses. Specifically, this research assesses a model of burnout in mental health nurses that includes: the work stressors, role ambiguity, role conflict, and workload; the individual characteristics, age, education, and work experience; the work attitude, job satisfaction; and the degree of social support in the workplace. This research also examines whether the nurse's perception of personal safety in the workplace, a substantial workplace issue within mental health care, is a significant predictor of burnout in mental health nurses.

The results of this research could lead to the development of effective interventions to reduce workplace stress and mitigate the development of burnout in mental health nursing staff. Understanding and eliminating unfavourable working conditions, including the potential for personal harm faced by mental health nurses could

lead to a decrease in employee illness, absenteeism, and turnover, a potential improvement in the quality of patient care, and a decrease in the deleterious effect burnout has on the health care system's limited financial resources.

Significance and Problem Statement

There is currently a recognized and significant shortage of nurses throughout Canada, and indeed globally. Unfortunately, there is little empirical evidence that this shortage will be remedied in the near future (Canadian Nurses Association, 2002). The prevailing research suggests that this predicament cannot be resolved by simply training more nurses. At present, the average age of a Canadian nurse is 44.6 years (Canadian Institute for Health Information, 2004), an increase from approximately 40 years of age since 1992 (Canadian Nurses Association & Canadian Federation of Nurses Unions, 2002). This trend raises two critical issues for the future of nursing in Canada: first is the loss of thousands of nurses in an impending mass retirement, since current estimates by the Canadian Institute for Health Information (2004) suggest one third of all nurses will be eligible to retire in the next decade; second is the imminent loss of mentoring provided by experienced nurses from an already beleaguered workforce. Within the next two decades, a large number of expert nurses will be preparing to leave the profession. The nursing shortage is not simply a problem of replacing retiring staff. Nurses nearing retirement are the most experienced staff members and role models for novices entering the profession; it is through observation of, and mentoring by, experienced nurses that new nurses obtain greater competency in practice(Benner, 1985). Therefore, there is a need to retain experienced nursing staff for as long as possible. The loss of expert

practitioners, who would otherwise mentor new staff, will affect the flow of experience-based knowledge from the expert nurse to the new graduate. The retirement of experienced nurses will leave a gulf in the practical knowledge base throughout the entire nursing profession.

Research on burnout has suggested that mental health nurses are prone to emotional exhaustion (Janssen, de Jonge, & Bakker, 1999; Jenkins & Elliott, 2004; Leiter & Harvie, 1996). The conditions in which mental health nurses work are often unpredictable and potentially dangerous. In addition to the work stressors of increased workload, increased patient acuity, and inadequate staffing, mental health nurses have the added pressure of dealing intimately with a disturbed, emotionally demanding, and often unpredictable and violent patient population (Ceslowitz, 1989; Tummers, Janssen, Landeweerd, & Houkes, 2001). These unique workplace conditions make the recruitment and retention of mental health nurses particularly challenging. Authors of studies that examine mental health nursing staff have repeatedly highlighted a need for more research on the predictors of burnout within this subgroup of nurses (Dawkins, Depp, & Seltzer, 1985; Higgins, Hurst, Wistow, & Owens, 1997; Moore & Cooper, 1996). An improved understanding of the adverse conditions in which mental health nurses work, and the individual characteristics, and antecedents of burnout, may provide solutions to the problem of recruiting and retaining mental health nursing staff (Deary, Watson, & Hogston, 2003; Janssen, de Jonge, & Bakker, 1999). The need to create positive work environments in order to retain experienced mental health nurses and the continuing need to recruit new professionals make research on burnout within mental health nursing staff imperative at this time.

Purpose and Research Questions

The purpose of this research is to examine the role specific variables have on the development of burnout among mental health nursing staff. Burnout among nurses has been demonstrated to be related to work stressors (e.g. Arnetz & Arnetz, 2001; Coffey, 1999; Duquette, Kerouac, Sandhu, & Beaudet, 1994; Jenkins & Elliott, 2004; Kilfedder, Power, & Wells, 2001; Payne, 2001), individual characteristics (Alimoglu & Donmez, 2005; Boey, 1998; Ceslowitz, 1989; Schmitz, Neumann, & Oppermann, 2000), and organizational conditions (Arnetz & Arnetz, 2001; Bowers et al., 1999; Burke, 2003; Constable & Russell, 1986; Janssen, de Jonge, & Bakker, 1999; Parker & Kulik, 1995). Previous research has indicated that mental health nursing can be particularly stressful (Burnard, Edwards, Fothergill, Hannigan, & Coyle, 2000; Carson, Fagin, Brown, Leary, & Bartlett, 1997; Dallender, Nolan, Soares, Thomsen, & Arnetz, 1999; McLeod, 1997). This study tests eight of the best-known correlates of burnout, including three workplace stressors (role ambiguity, role conflict, and workload), three individual characteristics (age, education, and work experience), one work attitude (job satisfaction), and one working condition (degree of perceived social support in the workplace).

There is also evidence that a concern for personal safety can have a negative impact on the well-being of nurses (Arnetz & Arnetz, 2001; Bowers et al., 1999; Evers, Tomic, & Brouwers, 2002; Garrett & McDaniel, 2001; Higgins, Hurst, & Wistow, 1999; Higgins, Hurst, Wistow, & Owens, 1997; Lipscomb & Love, 1992; Nolan, Dallender, Soares, Thomsen, & Arnetz, 1999; Wells & Bowers, 2002; Whittington, 2002). To date, however, no research has focused on an individual's perception of personal safety as a predictor of burnout in mental health nurses. The goals of this study are therefore to test a model of burnout in mental health nurses that includes the best-known correlates of the phenomenon and to examine whether the perception of personal safety is a significant

predictor of burnout once the known predictors are included in the model. Specifically, this research will answer the following research questions:

1. Are job satisfaction, role ambiguity, role conflict, workload, social support, age, education, and work experience significant predictors of burnout in mental health nurses?
2. Is the perception of personal safety a significant predictor of burnout in mental health nurses in a model that includes the best-known predictors of burnout?

The results of this research will be compared with previous studies on burnout in nurses in general, and mental health nurses specifically, in order to improve our understanding of burnout in mental health nurses. The results may help to identify which organizational and individual characteristics predispose some mental health nurses to suffer burnout. Health care administrators and nurse managers can also utilize the findings of this research to develop effective interventions that target the precursors of burnout in mental health nurses. Finally, the results of this study may assist in establishing work environments that foster a healthy and satisfied nursing staff.

Chapter 2

Literature Review

A better understanding of burnout among mental health nurses must begin with an exploration of the uniqueness of the mental health nursing environment and the phenomenon of burnout. The literature review is therefore separated into five main sections. The first section discusses what is known about burnout in mental health nurses. The second section of the review examines the evolution of burnout theory and the third gives an overview of stress/occupational stress theory. The next section examines the best-known predictors of burnout. The final section reviews literature pertaining to perception of personal safety. The literature review concludes with a synopsis and a description of the framework examined in this study.

Burnout in Mental Health Nurses

For the purposes of this research a mental health nurse is defined as an individual who has generalized nursing training (either as a registered nurse, R.N., or licensed practical nurse, L.P.N.) and additional experience and/or preparation in caring for individuals diagnosed with mental illness. Specifically, this research examines mental health nurses who work with acute-care clients in a psychiatric hospital setting. However, very few studies reviewed for this research were specific to mental health nurses working in acute care settings. Jenkins and Elliott's (2004) survey study of nurses (n = 93) on 11 mental health wards in the United Kingdom (UK), is one of the few. In their study Jenkins and Elliott reported that workload, social support, and working with an aggressive patient population were correlated with emotional exhaustion and depersonalization, findings that are relevant to this research. Despite the Jenkins and

Elliott research, however, much of the literature on burnout in mental health nurses appears to be specific to community mental health. For example, Coffey (1999) surveyed 104 forensic community mental health nurses in England and Wales, and found that over 40% scored high for emotional exhaustion. Edwards, Burnard, Coyle, Fothergill, and Hannigan have published a number of recent studies on stress and burnout in community mental health nurses. In their papers, the researchers reported that workload, social support, and issues with clients were related to stress and burnout in nurses (Burnard, Edwards, Fothergill, Hannigan, & Coyle, 2000; Edwards, Burnard, Coyle, Fothergill, & Hannigan, 2000b). Specifically, in their review of the literature on stress and burnout in mental health nurses, Edwards and colleagues (2000a) reported that role conflict, role ambiguity, and personal safety concerns were stressors reported more often by mental health nurses than by nurses in general. The review also underscored that, as well as being exposed to many of the stressors innate to the nursing profession, mental health nurses are obliged to work with, over the long-term, a disturbed patient population (Higgins, Hurst, & Wistow, 1999; Jones, Janman, Payne, & Rick, 1987; Tummers, Janssen, Landeweerd, & Houkes, 2001; Whittington & Higgins, 2002). The uncertainty and reduced sense of control that results from working with mentally ill clients may lead to an increased fear of violence (Dallender, Nolan, Soares, Thomsen, & Arnetz, 1999).

Perhaps one of the most comprehensive and recent studies of burnout in mental health nurses was produced by Kilfedder, Power and Wells (2001), who surveyed 510 psychiatric nurses in Scotland. In their study, Kilfedder et al. reported a number of correlations between age, work experience, job satisfaction, social support, and role

ambiguity with all three dimensions of burnout. This study is also one of very few that reported the total proportion of the sample that is experiencing a high level of burnout as defined by Maslach et al. (1996). The sample in this study, however, included nurses from both acute- care *and* community health settings, and thus, comparisons to the present research are tenuous. Moreover, the studies by Coffey (1999), Edwards et al. (2000b), and Kilfedder et al. (2001) have, along with a number of other recent studies on burnout in nurses (Firth & Britton, 1989; Higgins, Hurst, & Wistow, 1999; McLeod, 1997), emerged from the UK. There is a scarcity of current research on burnout in mental health nurses working in acute-care settings in North America and, to the best of the researcher's knowledge, there are no recent studies of burnout in Canadian mental health nurses working strictly in acute-care psychiatry. Therefore, there is a need to study the factors that affect the quality of work life of mental health nurses in the context of the ever-changing and often strained mental health care services in Canada.

Researchers have suggested that further study, specifically examining mental health nurses, is required in order to identify differences in work stressors, burnout, and job satisfaction among the diverse areas of nursing (Carson, Wood, White, & Thomas, 1997; Higgins, Hurst, & Wistow, 1999). Despite this call for further research (Coffey, 1999; Kilfedder, Power, & Wells, 2001), studies of mental health nurses tend to be fewer than enquiries related to burnout in other occupations. The need to study this subgroup of nurses is highlighted repeatedly in the literature on occupational stress and burnout in health care. For example, Dunn and Ritter (1995), Jenkins and Elliott (2004), and Burnard, Edwards, Fothergill, Hannigan, and Coyle (2000) have all suggested that while

mental health nurses experience work stressors equivalent to those of general nurses, they work in a distinct environment, one that may present a number of unique working conditions and situations that are significant predictors of burnout.

In particular, some research has suggested that it is the unpredictable behaviour of mental health clients that is a work stressor experienced generally by mental health workers (Tummers, Janssen, Landeweerd, & Houkes, 2001). Unique work stressors, which may lead to a more serious and enduring frustration, can create work stress among mental health nurses that, when compared to other occupations, is unusually elevated (Carson et al., 1996). While studies have suggested that mental health staff experience stressors distinct from other nursing sub-groups, there is scarce empirical evidence of the relationship between these stressors and burnout. Given the potential for high levels of work stress (Carson et al., 1996; Cottrell, 2001; Edwards & Burnard, 2003; Jones, Janman, Payne, & Rick, 1987), a closer examination of the working conditions experienced by mental health nurses, and of the potential link between their perception of personal safety and burnout, is prudent. Coffey (1999) also suggested that more research on burnout in mental health nurses in general is required because the mental health domain is innately taxing – a suggestion that was also made by Moore and Cooper in 1996.

Burnout Theory

It was Herbert Freudenberger (1986) who first suggested the term "burnout" to describe the state of physical and emotional depletion experienced by himself and his colleagues while working intensively in the free clinic movement of the late 1960s and early 1970s. Striving to provide free care to those members of society who were unable to access traditional health care, the workers in the free clinics often reported feeling emotionally exhausted as a result of the demands placed upon them. Recognizing a pattern in the symptoms being described, Freudenberger began to explore the phenomenon. By the late 1970s and early 1980s, research on what became known as "burnout" was beginning to emerge. The early literature was primarily anecdotal, and interest in the subject was mostly among researchers and practitioners in various human service professions (Daley, 1979; Forney, Wallace-Schutzman, & Wiggens, 1982; Kremer & Owen, 1979; Warnath & Shelton, 1976).

In the mid-1970s, the consolidation of the previous definitions of burnout eventually led Christine Maslach, a pioneer of research on burnout, to develop a multidimensional theory and a measurable construct for the phenomenon (Maslach & Jackson, 1981). Maslach asserted that burnout should not be viewed as a condition that is either present or absent (Maslach & Jackson, 1981; Maslach, Schaufeli, & Leiter, 2001), but rather a continuous variable, ranging from low, to average, to high degrees of burnout. As part of the conceptualization and definition of burnout, Maslach provided an instrument for measuring the level of burnout, the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981). Since that time, there have been several other models of burnout proposed, but Maslach's theoretical framework and instrument endures and has become the standard used in most studies (Barnett, Brennan, & Gareis, 1999; Cordes & Dougherty, 1993).

According to Maslach's model, burnout is a multidimensional phenomenon consisting of: depersonalization, a reduction in the sense of personal accomplishment, and emotional exhaustion (see Figure 1). These conditions arise predominantly within individuals who work extensively with others, under conditions of considerable workload and time pressure (Maslach & Leiter, 1997; Maslach, Schaufeli, & Leiter, 2001).

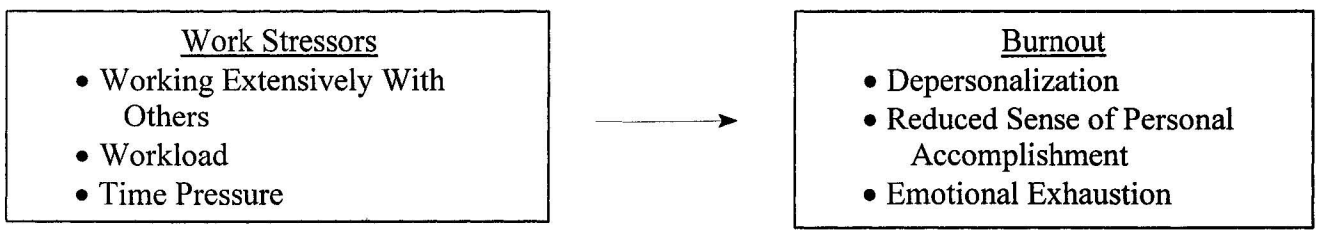

Figure 1. Model of Burnout

According to Maslach, the dimension defined as depersonalization is a cluster of behaviours that include cynicism and a diminished concern for the client. Maslach suggests that working with others, particularly in the human services, creates an emotional strain that can overwhelm service providers and impair their ability to effectively engage, and respond to their clients (Maslach & Jackson, 1981; Maslach & Leiter, 1997; Maslach, Schaufeli, & Leiter, 2001). In attempting to cope with stressors related to client demands, workers can develop an indifference to their clients and their needs, which in turn reduces the psychological and emotional demands experienced by the service provider. This transformation results in the depersonalisation of the client.

It should be noted that since the original model was proposed, Maslach has modified the functional definition of depersonalization. Maslach suggests that the

behaviours exhibited by nurses experiencing this dimension of burnout are more far-reaching than simple depersonalization of the patient. The outward expression of this dimension is, according to Maslach, more akin to a broad cynicism directed toward the patient, fellow staff, and work environment (Maslach, Schaufeli, & Leiter, 2001). Therefore, Maslach has recently suggested that the dimension of depersonalization should be renamed cynicism. As the term depersonalization is still widely used in the literature to describe this aspect of burnout, it is also employed in this study.

The second dimension of the burnout phenomenon, a reduction in the sense of personal accomplishment, is described as a perceived lack of achievement and ability, and a lack of productivity (Maslach & Jackson, 1981; Maslach & Leiter, 1997; Maslach, Schaufeli, & Leiter, 2001). According to Maslach, the reduction in personal accomplishment appears as a tendency to evaluate oneself negatively, particularly with regard to one's work with mental health consumers. It occurs in situations where workers report feelings of unhappiness about themselves and dissatisfaction with their accomplishments, or the lack thereof, in their current work role. This feeling of a lack of personal accomplishment, which Maslach recently re-named inefficacy, is perhaps the most difficult dimension to clearly relate to the concept of burnout. Some researchers have suggested that the sense of inefficacy appears to be an outcome of emotional exhaustion (Lee & Ashforth, 1996). It has also been suggested that working within an environment that fosters chronic and overwhelming emotional exhaustion coupled with a hostile and cynical attitude has a profound deleterious effect on a worker's sense of accomplishment. Persistent emotional exhaustion and depersonalization (cynicism) can

leave the worker devoid of direction and motivation. Over time, the lack of motivation, low self esteem, and low job satisfaction can create an overwhelming sense of inefficacy with respect to work-related skills and objectives (Bandura & Locke, 2003; Carson, Fagin, Brown, Leary, & Bartlett, 1997; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). For the purposes of this research and because it is still widely used in the literature, the original term, reduced sense of personal accomplishment, will be used to describe the dimension of burnout typified by the feelings of being unable to complete tasks and adequately fulfill roles within the workplace.

The one dimension of burnout that best embodies the phenomenon, and is most frequently reported and examined in the literature, is emotional exhaustion (Maslach, Schaufeli, & Leiter, 2001; Stordeur, D'hoore, & Vandenberghe, 2001). Cordes and Dougherty (1993) suggest that emotional exhaustion is "...characterized by a lack of energy and a feeling that one's emotional resources are used up [which] ... may coexist with feelings of frustration and tension" (p. 623). The research on emotional exhaustion has suggested that the condition may manifest itself in physical characteristics such as an absence of restful sleep, waking up fatigued, or a lack of the necessary mental and/or physical energy required for activities of daily living or work (Maslach & Leiter, 1997). As emotional exhaustion is the most identifiable and widely reported component of burnout, it has become the most thoroughly studied (Aveline, 1995; Cocco, Gatti, de Mendonca Lima, & Camus, 2003; Lee & Ashforth, 1996; Oehler, Gage-Davidson, Starr, & Lee, 1991). Understandably, this has created some debate concerning the functional definition and measurement of emotional exhaustion and its relationship to the phenomenon of burnout (Lee & Ashforth, 1996; Maslach, Schaufeli, & Leiter, 2001; Shirom, 2003).

The inherent association of emotional exhaustion with burnout has led some researchers to argue that emotional exhaustion and burnout are in fact the same psychological state (Shirom, 1989) and may overlap with affective conditions such as depression and anxiety disorders (Shirom & Ezrachi, 2003). However, Maslach contends that suggesting emotional exhaustion is analogous to burnout or other psychological conditions, ignores evidence that there are other facets to the phenomenon of burnout. For example, Maslach argues that feelings of inefficacy (reduced sense of personal accomplishment) actually arise from an absence of necessary resources, a reduced sense of productivity, and a lack of promotion within an organization, while emotional exhaustion and depersonalization are produced by work stressors such as work overload and interpersonal conflict with both co-workers and clients (Maslach, Schaufeli, & Leiter, 2001). In support of the claim that personal accomplishment is an independent dimension of burnout, researchers have reported that feelings of inefficacy appear to develop simultaneously with the other two dimensions of burnout. This suggests that the dimension of personal accomplishment is independent from, and not a result of, emotional exhaustion and depersonalization and should be regarded as a separate facet of burnout (Leiter & Harvie, 1996; Maslach, Schaufeli, & Leiter, 2001).

The importance of improving our understanding of burnout is illustrated by evidence that the ill effects of burnout transcend the individual health care worker often affecting other individuals within an organization (Burke & Richardson, 2000; Hobfoll & Shirom, 1993; Leiter, Harvie, & Frizzell, 1998). There is research that suggests that the emotional exhaustion, depersonalization, and feelings of reduced personal

accomplishment that characterize burnout can have a negative impact on the welfare of the health care recipient. In a large-scale survey conducted in the UK, researchers found that the staff reported that burnout had a negative effect on the quality of mental health nursing care provided to patients and their families (Edwards, Burnard, Coyle, Fothergill, & Hannigan, 2000a). Unfortunately, the study specifically examined community mental health nurses employed by the National Health Service in Wales, making comparisons with this research difficult. For example, unlike community mental health nurses, hospital-based mental health nurses presumably work with clients experiencing increased acuity, since hospital admissions in today's economy tend to be limited to extremely ill clients. As well, the UK's National Health Service, and its system and culture of nursing, are not necessarily analogous to the Canadian context. In another study, and using a cross-sectional design, Vahey, Aiken, Sloane, Clarke, and Vargas (2004) surveyed nurses (n = 820) as well as health care clients (n = 621) to determine if the environment and nurse burnout had an impact on patient satisfaction with nursing care. The researchers report a statistically significant inverse relationship between nurse burnout and clients' feelings of satisfaction related to care. This study, however, was conducted using a sample of clients diagnosed with Acquired Immune Deficiency Syndrome (AIDS) and nursing staff employed to care for AIDS clientele. Once again, these findings cannot be extrapolated to an acute-care mental health setting.

In a cross-sectional Canadian study sampling approximately 3312 employees varying in occupational status (nurse participants n = 1268), Leiter, Harvie, and Frizzell (1998) found an inverse relationship between nurse burnout (emotional exhaustion

specifically) and patient satisfaction, and indicated that as levels of emotional exhaustion increased, patient satisfaction with nursing care declined ($p < 0.01$). Depersonalization and personal accomplishment were not shown to be related to patient satisfaction scores and therefore these findings warrant further investigation. While this study was conducted on a large scale within the Canadian context, it did not expressly examine mental health nurses or any of the other known predictors of burnout. Additionally, the researchers employed a general version of the Maslach Burnout Inventory not specific to health service professionals, making comparisons to research on burnout in the health services questionable.

Research has also shown that emotional exhaustion and concomitant depression in nurses can lead to increases in absenteeism, increases in the use and misuse of sick leave, and a high turnover of staff, all of which can have a significant financial cost to an organization (Cottrell, 2001; Janssen, de Jonge, & Bakker, 1999; Song, Daly, Rudy, Douglas, & Dyer, 1997). In Cordes and Dougherty's (1993) review of studies (spanning twenty years) related to job burnout, the cumulative and adverse effects of work stressors were found to result in a state of emotional exhaustion, the most distinguishable dimension of the burnout phenomenon. But burnout has not been extensively studied with mental health nurses who work in an acute-care setting. Thus, as burnout in the nursing profession has far-reaching, costly, and deleterious effects upon health care staff, clients, and organizations, there is considerable need to study the associated precursors to emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment. Finally, as previously noted, research within the Canadian health care

context is lacking, and to date no studies conducted in Atlantic Canada have been identified.

Stress and Occupational Stress Theory

Occupational stress is one probable precursor to burnout and has been previously examined in the nursing profession. Research on the experience of stress differentiates between the stimulus and the resultant individualized response. Stress, as defined by Hans Selye (1956) is the non-specific, individual response to environmental stressors or stimuli. The stimuli – those conditions and situations experienced by individuals in their daily lives – are defined as stressors, while the adverse individual response to the stressor(s) is defined as stress. Stress, therefore, is the psychobiological response to adverse environmental conditions (French, Caplan, & Van Harrison, 1982; Lazarus & Folkman, 1984). Studies that have examined the development of burnout in nursing have pointed to the complex environmental conditions in which nurses are employed (Cocco, Gatti, de Mendonca Lima, & Camus, 2003; Cottrell, 2001; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Malach-Pines, 2000; e.g. Robinson, Clements, & Land, 2003). The findings of literature reviews on burnout (e.g. Burke & Richardson, 2000; Cordes & Dougherty, 1993; Edwards, Burnard, Coyle, Fothergill, & Hannigan, 2000a; Hobfoll & Shirom, 1993; Maslach, Schaufeli, & Leiter, 2001; Moore & Cooper, 1996) are that the phenomenon is a consequence of one's exposure to chronic work stressors and individual characteristics. Maslach, Schaufeli, and Leiter (2001) suggested that burnout is job-related and situation-specific relative to emotional distress, such as depression. In most research on burnout, the premise is that stress resulting from workplace stimuli – role ambiguity, role conflict, little control, a lack of social support, and workload – may lead to burnout (Fimian, 1984; McAbee, 1991; Payne, 2001).

Clearly, research on burnout among mental health nurses must begin with an examination of workplace stressors and stress.

Stress that occurs within, and as a result of, the work environment has been defined as occupational or work stress. The foremost approaches to work-related stress and its outcomes are reviewed in Cooper and Baglioni (1988). The major theoretical line of thought that has guided most studies of occupational stress conceptualizes stress as a state occurring in response to an employee's perceived job demands, wherein the demands are seen to be taxing, exceeding, or otherwise threatening the employee's job resources (French, Caplan, & Van Harrison, 1982; Lazarus & Folkman, 1984). Such demands arouse the central nervous system and – depending upon the type of stressors, and the physiological and psychological susceptibility and resistance (i.e. coping) of the individual – may engender a maladaptive health response (Kristensen, 1996). A model of stress as an individual response to work stressors is illustrated in Figure 2.

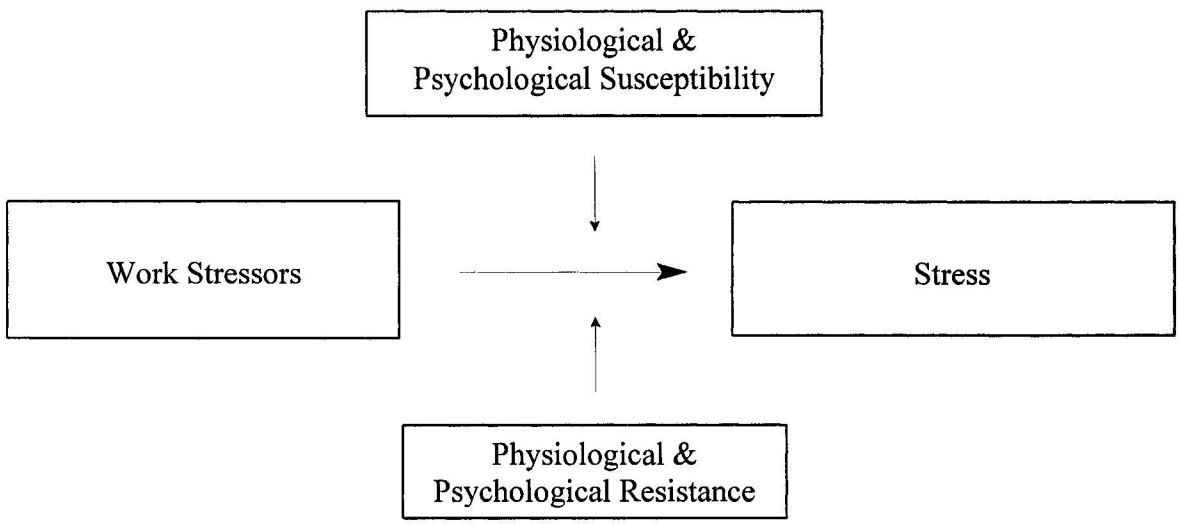

Figure 2. Stressor - Susceptibility/Resistance - Stress Model

There is a large body of research that examines susceptibility and resistance in the stressor-stress model; however, since this study is not focusing on stress, individual susceptibility and resistance variables that are predictors of stress will not be measured. Instead, the individual characteristics and stressors that have been shown to predict burnout will be examined.

Arguably, work stressors exist in all occupations. The nursing profession, however, is understood to be exceptionally taxing (McAbee, 1991). In a review of more than 100 different occupations, using a stress rating scale to compare work pressures, Cooper and Baglioni (1988) established that nursing had one of the highest scores on measurements of stress among the human service occupations. Given that the nursing profession records relatively high scores for occupational stress, researching the phenomenon in this field is both prudent and practical. Within the nursing profession, work stressors are situations defined as "...menacing and stress-generating events which can be physical, psychological, or social in nature" (Duquette, Kerouac, Sandhu, & Beaudet, 1994, p. 340). A number of studies of the nursing profession have demonstrated that the work environment generates many occupational stressors (Arsenault & Dolan, 1983; Arsenault, van Ameringen, Leonard, & Dolan, 1990; Gray-Toft & Anderson, 1981), that likely play a role in the development of burnout. Thirty-six studies that examine the proposed relationship between occupational stressors and burnout in nursing were selected and critically analysed by Duquette et al. (1994). In their final analysis, the authors suggest that stressors such as role ambiguity and workload contribute to the development and/or maintenance of burnout, while other factors, such as hardiness, social support, and coping skills, may provide protection.

Predictors of Burnout

In a review of 33 articles that examined variables related to burnout, Melchior et al. (1997) performed a meta-analysis of nine studies and identified four different groupings of factors related to burnout: personal characteristics, organizational characteristics, working attitudes, and social support. Within these four groups, the researchers identified 34 factors that were demonstrated to be related to burnout. The predictors that demonstrated the strongest evidence for a relationship with burnout included job satisfaction, role conflict, workload, collegial (social) support, and age. The individual characteristics that were found to be predictors of burnout included work experience and age. Of all the variables examined in their analysis, Melchior et al. reported that there was strong evidence that role conflict, workload, collegial support, and age were correlates to burnout in nurses specifically. The authors also suggested that there was weak evidence that other factors (gender, autonomy, and a lack of personal involvement in the organization) were predictors of burnout, either in general or among nurses specifically. Therefore these variables are not included in this study. This research includes eight variables known to be moderate and strong predictors of burnout, based on the four functional groupings that Melchior et al. identified in their meta-analysis. Support for the selection of these eight variables is provided by other research on burnout.

In a study of job satisfaction and burnout in mental health staff, Leiter found that job satisfaction was strongly related to burnout. Specifically, Leiter reported that job satisfaction was a significant predictor of emotional exhaustion (Leiter, 1988). Spaans (1991) (English version unobtainable), reported in Melchior et al. (1997), described similar results in a sample of psychiatric nurses working in diverse settings. Studying job satisfaction, intention to leave, and burnout in nursing staff, Cameron, Horsburgh, and

Armstrong-Strassen (1994) employed a triangulated methodology, using both quantitative and qualitative procedures including mail-out surveys and structured interviews, and found that in comparison to other nursing groups, mental health nurses were the least satisfied with their jobs. Cameron et al. also found that psychiatric nurses reported the highest levels of burnout among the classifications sampled. Unfortunately, this important Canadian work is more than a decade old and does not include an examination of other known predictors of burnout. As well, the non-random sample and study design of Cameron et al. make its application to other settings/samples problematic. In the study, the sample was self-selected; in the survey portion by returning a completed survey and in the interview portion by agreeing to participate. Therefore, the sample cannot be considered an accurate representation of the population from which it was drawn. The Cameron et al. study provides additional evidence that, in comparison to other nurses, mental health nurses experience lower levels of job satisfaction and high levels of burnout (1994). In a literature review of job satisfaction among nurses, Lu, While, and Barriball (2005) reported that job satisfaction was substantially correlated to occupational stress, moderately related to role ambiguity and social support, and slightly correlated with role conflict, age, work experience, and education. For these reasons, job satisfaction is included in this study as a known predictor of burnout among mental health nurses.

Role ambiguity and role conflict in the workplace have also been demonstrated to account for a significant amount of variance in the measures of emotional exhaustion and depersonalization, two dimensions of burnout in human service workers (Schwab & Iwanicki, 1982). In a study of mental health care staff, including nurses, Stout and Posner (1984) reported that role conflict was moderately related to the total burnout score. In a more recent study, Leiter and Maslach (1988), using a cross-sectional survey design,

reported that role ambiguity and role conflict were significantly related to emotional exhaustion in a sample of nurses. Unfortunately, mental health nurses were not represented in the study sample, which was drawn from an acute-care facility in California, USA. Again, in the meta-analysis of variables related to burnout in nurses, Melchior et al. (1997) reported that role conflict was demonstrated to be a significant predictor of burnout in nurses in two of the studies examined. There is evidence then that role conflict and role ambiguity are moderate, and possibly strong, predictors of burnout in nursing staff, and therefore these variables have been included in this study.

While there is evidence that workload is a significant work stressor for nurses (Burke, 2003; Gelsema, van der Doef, Maes, Akerboom, & Verhoeven, 2005; Janssen, de Jonge, & Bakker, 1999; Tummers, Janssen, Landeweerd, & Houkes, 2001), Gaudine (2000) notes that the concept of workload has a variety of functional definitions and a number of dimensions that may make measuring this variable difficult. Similarly, Forchuk (1996) also suggests that the demands placed on mental health nurses, due to the nature of mental health care, are more subjective than those found in other areas of nursing, and that the complex interpersonal nature of mental health nursing makes workload measurement among this professional group problematic. Despite the difficulties associated with measuring this variable, Burke (2003), employing a longitudinal survey design, found that increases in the ratio of patients to nurses led to reports of lower job satisfaction, poorer psychological health, and diminished organizational performance among nurses. Burke's research did not, however, examine different nursing areas or differing patient needs and was conducted primarily within the context of hospital restructuring. As well, Burke's research, while significant in its own right, employed a general version of the MBI and did not examine all of the other best-known predictors of burnout, making comparisons and generalizations difficult.

Using a cross-sectional study design (n = 136), Pinikahana and Happell (2004) demonstrated that workload was the most significant emotional stressor as measured by the Nursing Stress Scale. While the results of this study correspond to previously conducted research in both the UK and Australia, the use of a non-random sample of rural Australian psychiatric nurses precludes generalization. Therefore, the relationship between workload and burnout among mental health staff warrants additional study. A better understanding of the workload experienced by mental health nurses, and the relationship this factor has to burnout, is a relevant addition to the existing literature.

The literature also indicates that, in addition to perceived workload, the absence of effective social support in the work setting may also affect the development of burnout by fostering increased stress and poor nursing performance (AbuAlRub, 2004; Taylor & Barling, 2004). In examining the predictors of burnout, a number of researchers have hypothesized that a low level of perceived support from co-workers and supervisors is correlated with stress and aspects of burnout (Baruch-Feldman & Schwartz, 2002; Browner et al., 1987; Chapman, 1993; Oehler, Gage-Davidson, Starr, & Lee, 1991; Ogus, 1990). Two sources of support in the workplace have been repeatedly studied: support from supervisors and support from co-workers (Baruch-Feldman & Schwartz, 2002; Browner et al., 1987; Constable & Russell, 1986; Lewis et al., 1992; Ogus, 1990; Ootim, 2001). The relationship between burnout and support has been examined in different studies in diverse nursing environments and has been demonstrated to reduce the degree of emotional exhaustion and to potentially decrease the severity of depersonalization, two dimensions of burnout (Constable & Russell, 1986; Duxbury, Armstrong, Drew, & Henley, 1984). Studies by Ceslowitz (1989) and Boyle et al. (1991) examined coping, social support, and burnout in staff nurses and reported that a lack of collegial support was strongly correlated with burnout. Unfortunately, neither study was conducted using a

sample of mental health staff. In a recent study of mental health nurses, Coffey and Coleman (2001) employed survey research and reported that support from colleagues is correlated with occupational stress and emotional exhaustion. They also demonstrated that support from managers and colleagues was correlated with lower levels of stress and emotional exhaustion. Regrettably, Coffey and Coleman's study had a small sample size and therefore they could not test whether social support was a statistically significant predictor, moderator, or mediator of the relationship between occupational stress and burnout. As the literature provides evidence that collegial support is related to burnout among nurses, it is included in this study as a predicting variable.

In some studies, younger individuals report higher levels of the three components of burnout. Williams (1989), in a survey study of the individual characteristics of nurses and their relationship to burnout, concluded that age was negatively correlated with depersonalization and emotional exhaustion. These findings are similar to those of Seever (1984), who found that age was negatively correlated with depersonalization and the only variable significantly related to the phenomenon of burnout. More recently, Albar and Garcia-Ramirez (2005) reported that age was negatively correlated with emotional exhaustion in nurses, and Alimoglu and Donmez (2005) found that age was significantly negatively related to emotional exhaustion and depersonalization and positively related to personal accomplishment. In other words, the age of the nurse appears to be correlated with all three dimensions of burnout, as younger nurses are apparently more likely to experience the phenomenon.

Nursing experience and nursing education have also been demonstrated to be correlated with work stress and the dimensions of burnout (Albar & Garcia-Ramirez, 2005; Boyle, Grap, Younger, & Thornby, 1991; Demir, Ulusoy, & Ulusoy, 2003; Duquette, Kerouac, Sandhu, & Beaudet, 1994). In particular, more experienced and more

educated staff members scored lower on measures of work stress and burnout. Conversely, the results of other studies suggest no significant relationship between burnout and employment title, education, or nursing work experience (Hare, Pratt, & Andrews, 1988; McCranie, Lambert, & Lambert, 1987). Bartz and Maloney (1986) found an inverse relationship between education and burnout. The results of Bartz and Maloney's study, however, should be interpreted within the study limits. The researchers employed a small convenience sample (n = 89) drawn principally from one hospital (army medical centre). Eighty percent of the participants possessed a bachelor's degree and had fewer than four years of nursing work experience. The meta-analysis conducted by Melchior et al. (1997) reported that age was strongly related to burnout in nurses. As well, the analysis demonstrated that education and work experience were moderately related to burnout. Therefore, the predictors of age, education, and work experience are included in this study as known predictors of burnout.

Based on the evidence of certain predictors of burnout among nurses, this study measures job satisfaction, role ambiguity, role conflict, workload, social support, age, education, and work experience as predictors of burnout in mental health nurses. The review of the literature on burnout in nurses did not reveal any single study that incorporated all of these known predictors; hence this study tests a new model of burnout. Furthermore, as the literature on burnout in mental health nurses has suggested that working with mentally ill clients may result in an increase in the fear of violence (Burnard, Edwards, Fothergill, Hannigan, & Coyle, 2000; Dallender, Nolan, Soares, Thomsen, & Arnetz, 1999), this study also includes perception of personal safety as a potential predicator of burnout in mental health nurses, an area of research that has not been sufficiently developed to date (Crabbe, Alexander, Klein, Walker, & Sinclair, 2002).

Perception of Personal Safety

There is evidence that the perception of personal safety and low levels of perceived control over the work environment can act as work stressors contributing to the stressor-stress-burnout paradigm. Perception of personal safety has been previously identified as a workplace challenge within the nursing profession (Crabbe, Alexander, Klein, Walker, & Sinclair, 2002; Jakob & Rothen, 1997; Needham, Abderhalden, Dassen, Haug, & Fischer, 2004; Nolan, Soares, Dallender, Thomsen, & Arnetz, 2001). For example, Garrett and McDaniel (2001), in a cross-sectional, exploratory study of 287 full-time general nursing staff, reported that environmental uncertainty was a significant predictor of all three dimensions of burnout. The researchers found that perceived environmental uncertainty, manifested as perceptions of doubt about personal safety in the workplace, could result in occupational stress. It should be noted, however, that Garrett and McDaniel's study used a sample of general nursing staff and not mental health nurses specifically.

In a similar cross-sectional study, Crabbe et al. (2002) received completed survey's from 156 nursing staff working in a variety of "high-risk areas" (p. 121) and found that participants reported frequent interaction with violent clients. The MBI scores for these same nurses fell within the high range of burnout; 33% reporting high levels of emotional exhaustion, 28% reporting high levels of depersonalization, and 49% reporting low levels of personal accomplishment. Unfortunately, while psychiatric services were provided by several of the nursing units sampled, mental health nurses as a distinct group were not examined. The sample was further limited to nurses employed at Scottish hospital agencies and for this reason the results should be interpreted within the study limits. Crabbe et al. did not examine a variety of known predictors of burnout in their study and suggested that because of the chosen study design, causality could not be

inferred.

Unlike many other professions, mental health staff work in an environment where they may become targets of violent behaviour (Arnetz & Arnetz, 2001; Lipscomb & Love, 1992; Needham, Abderhalden, Dassen, Haug, & Fischer, 2004; Whittington & Wykes, 1994). In particular, mental health nurses often work where the ambiguity of safety as a direct result of constant threat can extract a substantial emotional toll (Arnetz & Arnetz, 2001). While there are various studies on the incidence of violence toward mental health nurses (Arnetz & Arnetz, 2001; Browner et al., 1987; Crabbe, Alexander, Klein, Walker, & Sinclair, 2002; Dawkins, Depp, & Seltzer, 1985; Lipscomb & Love, 1992; Wells & Bowers, 2002), there is relatively little research available on both the impact of threats of violence on the psychological well-being of nurses and the relationship between violence and burnout (Whittington, 2002). The victim of a violent attack by a patient may experience sudden increases in depression, a substantial drop in job and life satisfaction, and may become emotionally exhausted (Rippon, 2000). In a study of 1494 psychiatric nurses in 27 psychiatric hospitals in Japan, researchers found that an increased fear of physical violence (the study did not identify the source of the threat e.g. patient, co-worker, etc.) in the workplace was a significant predictor of a nurse's intention to leave, as well as the likelihood of professionals reporting low levels of job satisfaction and feelings of burnout (Ito, Eisen, Sederer, Yamada, & Tachimori, 2001). Ito et al. noted that their study was limited; it failed to assess the severity of the violence experienced by nurses, did not differentiate types of assault, and measured only reported nurses' intention to leave the job, not actual staff turnover.

Nolan, Dallender, Soares, Thomsen, and Arnetz (1999) used a cross-sectional study to examine the extent and nature of violence against mental health nurses and psychiatrists in five UK hospitals. The researchers collected responses from 301

participants and found that nurses were exposed to violence more often than individuals from other occupations. A considerable portion of the nurses surveyed felt they received inadequate support following incidents of violence. Similarly, in a detailed literature review on the topic of violence toward nurses in the UK, Wells and Bowers (2002) suggested that nurses appeared to be at significantly higher risk of assault when compared to workers in general – more than four times as high. The researchers indicated that nurses were more likely to experience violence than any other related health care profession. More specifically, the authors stated that mental health nurses were at a higher risk of violence than general nurses.

In a recent review measuring hospital staffs' views of their work environment and patients' perceptions of the quality of care in a single hospital over three years, researchers found that employee-reported violence was associated with negative staff ratings of the work environment (Arnetz & Arnetz, 2001). Additionally, these authors found an association between the experience of violence by health care workers and the patient-rated quality of care. Violence, therefore, is not just an occupational health issue related to the burnout of nursing staff but may have considerable implications for the quality of patient care. It should be noted that this study was not conducted in a psychiatric setting. Given that workers within the psychiatric setting experience higher levels of violence and increased threats of violence, a study examining violence and perceptions of safety in the hospital-based mental health care environment is warranted.

Only one study was identified that considered nursing staff burnout in the context of patient aggression. Examining both experiences with aggression and nursing workload among 551 staff working in homes for the elderly in the Netherlands, researchers found that physical and psychological aggression, and the number of weekly working hours, were related to emotional exhaustion, the most prominent facet of the burnout

phenomenon (Evers, Tomic, & Brouwers, 2002). Though this study demonstrated a statistically significant relationship between aggression and burnout, it was conducted using a sample of staff employed at long-term care facilities. Many of the residents at these facilities were geriatric psychiatry patients; however, the study did not differentiate the staff or skill mix of the employees. The results of this work, therefore, cannot be extrapolated to the mental health nursing population.

Findings in the literature pertaining to violence in nursing settings indicate that there is an increased risk of violence and assault in the mental health environment (Arnetz & Arnetz, 2001). There is evidence that experiences of violence and aggression at work, as well as the subjective perception of risk to personal safety, may be work stressors, which in turn are related to burnout in mental health nurses (Burnard, Edwards, Fothergill, Hannigan, & Coyle, 2000; Crabbe, Alexander, Klein, Walker, & Sinclair, 2002; Edwards, Burnard, Coyle, Fothergill, & Hannigan, 2000b; Payne, 2001). There is not, however, a clear indication that the perception of personal safety is a significant predictor of burnout in mental health nurses in any model that includes the best-known predictors of burnout. This study adds perception of personal safety to a model of burnout that includes eight of the best-known predictors of burnout, and assesses the relationship between perception of personal safety and burnout.

Framework

The burnout model used for this research is illustrated in Figure 3. As suggested by the literature on the predictors of burnout, this study hypothesizes that stressors in the workplace (role ambiguity, role conflict, workload, and perception of personal safety) create a stress response in some mental health nurses, which in conjunction with a lack of social support and low job satisfaction, can lead to burnout.

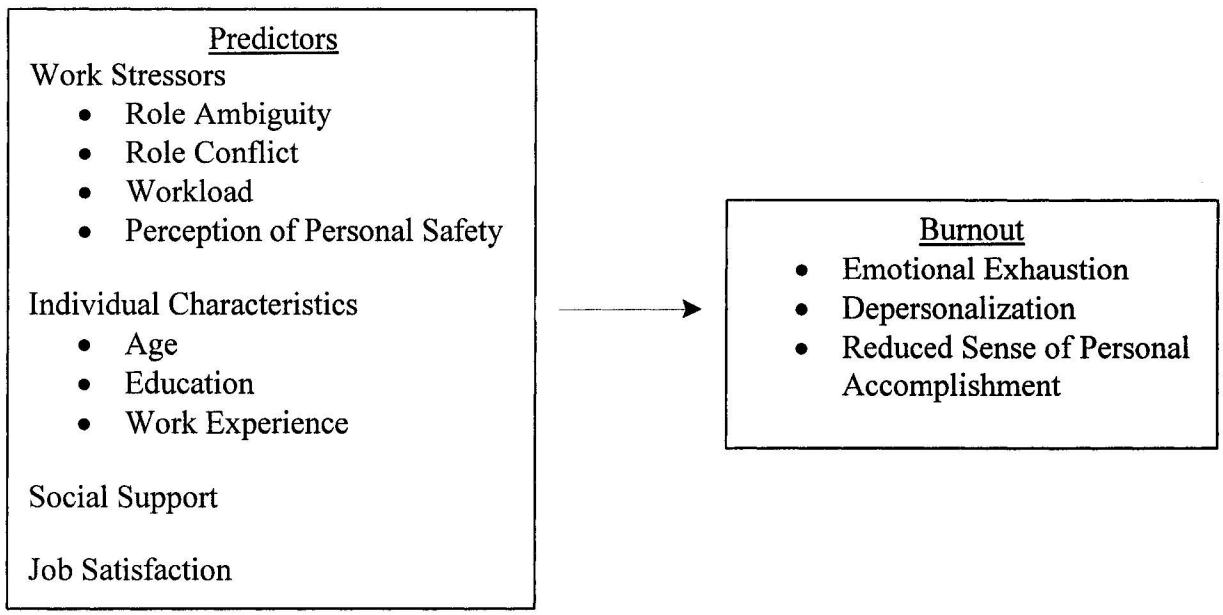

Figure 3. Predictors of Burnout Model

Summary

Research on the subject of burnout in nurses has produced a growing list of possible predictors of the phenomenon (Melchior, Bours, Schmitz, & Wittich, 1997). A number of studies have demonstrated that various work stressors (role ambiguity, role conflict, and workload) and individual characteristics (age, education, and work experience), as well as other factors (job satisfaction and social support) are related to burnout (Alimoglu & Donmez, 2005; Demir, Ulusoy, & Ulusoy, 2003; Jenkins & Elliott, 2004; Kilfedder, Power, & Wells, 2001; Melchior, Bours, Schmitz, & Wittich, 1997; Pinikahana & Happell, 2004). Evidence also exists suggesting that experiences with workplace aggression may affect nurse well-being and be related to burnout among mental health nurses (e.g. Whittington & Higgins, 2002; Winstanley & Whittington, 2003). However, there is an absence of research linking concern for personal safety and burnout. Additionally, no single study has incorporated all these variables in a model of burnout using a sample of mental health nurses employed by a hospital agency. Given the challenging work environment of mental health care, which includes the potential for violence, the relationship of these predictors to burnout is worthy of exploration.

In summary, this research tests a model of burnout in mental health nurses. The model includes eight known predictors of burnout as well as perception of personal safety. The data will be analysed to identify significant correlations between the variables and the best predictors of burnout. The results of this research will add to the existing literature on occupational burnout, as well as the literature on burnout in the nursing profession.

Chapter 3

Methodology

A cross-sectional study design was employed to determine whether job satisfaction, role ambiguity, role conflict, workload, social support, age, education, work experience, and the perception of personal safety predict burnout in mental health nurses working in an acute-care hospital setting. Using survey research, the best-known predictors of burnout and a suspected predictor (perception of personal safety) were measured in a sample of hospital-based mental health nursing staff. This chapter provides an overview of the study sample, the procedure, instruments, ethical considerations, and data analysis utilized in this research.

Population and Sample

This study used a convenience, non-probability sample. The target population for this research were all registered nurses (R.N.s) and licensed practical nurses (L.P.N.s) working in an acute-care mental health setting in Canadian hospitals. The accessible population included 318 full, part-time, and casual mental health nursing staff (R.N. = 171; L.P.N. = 147) employed at a psychiatric hospital in Atlantic Canada. All nursing staff, including L.P.N.s and R.N.s, were made aware of the study via word-of-mouth and posters displayed in the hospital units that provide in-patient care; short-stay/psychiatric assessment, acute-care psychiatry, geriatric psychiatry assessment, long-term care/geriatric psychiatry, long-term care/psychiatric transition, psychiatric rehabilitation, forensic psychiatry, and the developmental disability residential unit.

A total of 115 individuals completed the study questionnaire. The minimum sample size for such research, according to Nunnally and Bernstein (1994), is ten participants for each variable to be examined using linear regression analysis. This study

included nine variables and burnout; therefore the minimum sample size required was 100 participants. The sample (n = 115) exceeded the minimum sample size required for this research to be valid. Based on the number of respondents and total sample size L.P.N.s and R.N.s were examined as one group; separate analysis of the L.P.N. and R.N. groups was not conducted.

Measures

The study questionnaire was composed of seven separate instruments that measured the participants' level of burnout on three dimensions (emotional exhaustion, depersonalization, and personal accomplishment), job satisfaction, role ambiguity, role conflict, workload, social support, age, education, work experience, and perception of personal safety. With the exception of the Maslach Burnout Inventory (MBI) and the perception of personal safety survey, all the other instruments used in this study are presently in the public domain. The Maslach Burnout Inventory and associated demographic survey were purchased from Psychometrics Canada, Ltd. The perception of personal safety scale was developed by the researcher and was reviewed by two nursing faculty members at Memorial University of Newfoundland School of Nursing, one of whom has expertise in the area of nurses' work life. Two nurse managers completed the questionnaire prior to data collection to determine the amount of time required for completion of the questionnaire, and to comment on the clarity and understandability of the items.

Measure for burnout

Burnout was measured using the Maslach Burnout Inventory - Human Services Survey (MBI-HSS) (Maslach, Jackson, & Leiter, 1996), which has been used extensively

in a variety of studies on burnout in the health care professions (Adali & Priami, 2002; Alimoglu & Donmez, 2005; Carson, Fagin, Brown, Leary, & Bartlett, 1997; Ceslowitz, 1989; Evers, Tomic, & Brouwers, 2002; Payne, 2001; Vahey, Aiken, Sloane, Clarke, & Vargas, 2004) and has been demonstrated to have high levels of internal validity and reliability. This scale has three dimensions (emotional exhaustion, depersonalization, and personal accomplishment) that have reported Cronbach's alphas of .90, .79, and .71 respectively (Maslach, Jackson, & Leiter, 1996). Maslach et al. also claim that the one-year stability coefficients for the three dimensions have been measured to be .60, .80, and .82. In this study, the MBI demonstrated Cronbach's alphas of .90, .79, and .82 for the three dimensions. The MBI consists of 22 questions, such as "I feel depressed at work" and "I feel frustrated by my job." Participants are asked to indicate how often they feel that way about their job, on a six point scale ranging from (0) "Never" to (6) "Every day".

Researchers have established criterion validity for the MBI by comparing burnout scores to ratings of personal experience (Maslach & Jackson, 1981; Maslach, Jackson, & Leiter, 1996), dimensions of job experience (Maslach & Jackson, 1984; Stout & Williams, 1983), and personal outcomes (Maslach & Jackson, 1984). In addition, researchers (Cox, Kuk, & Leiter, 1993; Maslach, Jackson, & Leiter, 1996; Meier, 1984) have found evidence of construct validity. The MBI has been shown to be related to measures of job satisfaction, depression, and occupational stress and is therefore a suitable tool for this study. Given the volume of research that has employed the MBI, and its established reliability and validity, the MBI was an obvious choice for this particular study.

Measure for job satisfaction

Job satisfaction was measured using the Job Satisfaction Index (JSI) developed by Schriesheim and Tsui (1980). This six-item instrument is used to comment on overall job satisfaction. The scale assesses the employee's satisfaction with: the nature of the work, supervisor(s), colleagues, salary, promotion opportunities, and the job generally. Job satisfaction, as measured with this instrument, has been demonstrated to correlate positively with organizational commitment, organizational citizenship behaviours, and coping ability (Cohen, 1997; Tsui, Egan, & O'Reilly, 1992).

The JSI consists of six items, such as "How satisfied are you with the nature of the work you perform?" and "How satisfied are you with the pay you receive for your job?" The participants were asked to rate to what degree they agreed that the statements reflect their satisfaction with various aspects of their job. Responses were measured on a five-point Likert-type scale and ranged from (1) "strongly disagree" to (5) "strongly agree". A higher score on the JSI corresponds to a higher level of job satisfaction.

Cronbach's alphas for the JSI have been demonstrated to range from .73 to .78 (Cohen, 1997; Tsui, Egan, & O'Reilly, 1992). In this study, the Job Satisfaction Index (JSI) had a Cronbach's alpha of .78.

Measure for role conflict and role ambiguity

Role conflict and role ambiguity were measured using the Role Conflict and Ambiguity measure developed by House, Schuler, and Levannoi (1983). Role ambiguity, as measured with this scale, is positively correlated with role conflict, role uncertainty, job dissatisfaction, and emotional strain.

The measure consists of 15 items, and participants were asked to rate to what degree they agreed that the statements reflect their feelings of ambiguity and conflict within their work role (e.g., "I don't know what is expected of me" and "there are unreasonable pressures for better performance"). Responses were measured on a seven-point Likert-type scale ranging from (1) "strongly disagree" to (7) "strongly agree". Some questions that measure role ambiguity are reverse coded; therefore a higher final score reflects a higher level of ambiguity.

The Cronbach's alpha values for the Role Conflict and Role Ambiguity scale range from .79 to .86 (O'Driscoll & Beehr, 1994; Westman, 1992). The role conflict and role ambiguity measure demonstrated a Cronbach's alpha of .79 in this study.

Measure for workload

Workload was measured using Caplan's Job Overload scale. This measure was developed by Caplan, Cobb, French, Van Harrison, and Pinneau (1980), and consists of 11 items that measure feelings of job overload. This instrument is designed to measure an individual's perception of *how much* work is required by answering questions such as "How much workload do you have?" Responses were measured on a five-point scale ranging from (1) "hardly any" to (5) "a great deal". A higher score reflects a higher perceived workload. The validity of this instrument has been tested in several studies and has been shown to be positively correlated with work hours, sick leave use, and organizational size. The instrument has also been demonstrated to correlate negatively

with job satisfaction, and organizational commitment (Dwyer & Ganster, 1991; Phelan, Bromet, Schwartz, Dew, & Curtis, 1993; Sargent & Terry, 1998; Wallace, 1997).

Caplan's Job Overload scale has been used in several studies on workload, and has been demonstrated to have Cronbach's alpha values ranging from .72 to .81 (Dwyer & Ganster, 1991; Phelan, Bromet, Schwartz, Dew, & Curtis, 1993; Sargent & Terry, 1998; Wallace, 1997). The Cronbach's alpha calculated for Caplan's Job Overload scale in this study was .72.

Measure for social support

A modified version of Caplan's Scale for Social Support (Caplan, Cobb, French, Van Harrison, & Pinneau, 1980) was used to measure the participants' perception of support from supervisors and co-workers. The original scale includes 4 items that query the perceived support from co-workers, supervisors, spouse, and family and/or friends. The scale measures the extent to which various individuals are approachable, available to help the participant generally, or particularly when demands arise. The scale also measures the extent to which supervisors and colleagues are receptive to discussing participants' personal problems.

The measure for social support used in this study has been modified for this study to exclude responses that measure the support from spouse, family, and friends in order to construct a social support measure related specifically to the work environment. In the four item modified instrument, the participants answer questions (such as "How much is each of the following people willing to listen to your personal problems?") that rate the degree to which their colleagues, immediate supervisor(s), and co-workers, provide support at work. The participants' responses were scored on a five-point scale ranging

from (1) = "don't have any such person" to (5) = "very much", with higher scores reflecting a higher level of perceived support.

The Caplan Scale for Social Support has demonstrated high levels of reliability and validity (Lim, 1996). The internal consistency of this instrument has been tested in a number of studies and has been shown to range from .86 (Lee & Ashforth, 1993) to .91 (Repetti & Cosmas, 1991). In another study, the measures for supervisor and co-worker support were combined and shown to have correlated with overall job satisfaction and work-group cohesiveness, with a Cronbach's alpha of .80 (Lim, 1996). The modified version of Caplan's Scale for Social Support used in this study had a Cronbach's alpha of .86.

Individual measures

The participants also completed the 15-item Maslach Human Services Demographic Data sheet which has been designed for use in conjunction with the Maslach Burnout Inventory. The demographic data includes age, education, and work experience. Age was recorded in years. The participants' level of nursing education was recorded categorically and later collapsed to produce a dummy variable with just two categories: L.P.N., and R.N./Bachelor degree. As this study explored specifically burnout in mental health nurses, the participants' length of time in their current role as a mental health nurse, measured in years, is used as the variable for work experience.

Measure for personal safety

Perception of personal safety was measured using an instrument developed by the researcher. The measure consists of eight items and participants were asked to rate the degree to which each item reflects their perception of personal physical safety in the

workplace. This instrument included statements such as, "I feel at risk to be hit by a patient" and "I feel that my work environment is dangerous because of the patients I work with." Responses were measured on a five-point Likert-type scale ranging from (1) "strongly disagree" to (5) "strongly agree". A higher score indicates a greater level of concern for personal safety in the workplace. Two faculty members at Memorial University School of Nursing with expertise in the area of nurses' work life assisted in the development of this measure, to ensure construct validity. Additionally, two nurse managers completed the instrument in advance of data collection to address issues of clarity and understandability of the questions. The Cronbach's alpha for the perception of personal safety measure was .91.

Construct validity, as demonstrated when a measure correlates with other constructs as predicted by theory (Polit & Hungler, 1999), was addressed during the development of this instrument. It was anticipated that the perception of personal safety, as measured by this instrument, would be correlated with a number of other study variables. Specifically, a high level of concern for personal safety would be correlated with high levels of emotional exhaustion, depersonalization, role conflict, role ambiguity, and workload. Conversely, a low level of concern for personal safety would be correlated with high levels of personal accomplishment, job satisfaction, and social support. In fact, the results of this study demonstrated significant positive correlations of perception of personal safety with emotional exhaustion, depersonalization, role conflict, and role ambiguity, and the significant negative correlations of perception of personal safety with personal accomplishment, job satisfaction, and social support. These results provide

support for the validity and reliability of this instrument of this instrument, which can be further tested through its future use.

A copy of the study questionnaire, which is composed of these seven instruments, is included in Appendix A. The Maslach Burnout Inventory and Demographic Data Sheet are protected by copyright and therefore not reproduced in this study.

Data Collection

At the outset of the data collection phase, the division manager from one of the targeted clinical areas was contacted via telephone and asked to assist in facilitating a meeting with managers from the other clinical settings within the target hospital. As not all the managers were able to attend the initial meeting, separate meetings were arranged at a later date. In one case, face-to-face communication with the division manager was never accomplished; therefore correspondence with this manager was limited to writing.

At the initial meeting, the division managers were provided with a letter that briefly explained the purpose of the research, notified them of the researcher's presence on the nursing units, and solicited their support in encouraging their respective staff members to participate in the study (Appendix B). Each manager was given the opportunity to ask questions or to express concerns. The managers were supplied with four copies of a poster that provided information about the study (Appendix C) and asked to display them in each of the clinical settings. A poster was also placed in the hospital's main staff lounge. Two weeks prior to the data collection, a check of the study posters was completed in order to ascertain that they had been displayed in high traffic and communal areas of the target nursing units. Posters that had been concealed, removed, or damaged were replaced at that time.

Over a 30-day period the researcher met with staff from each of the targeted clinical areas. An effort was made to recruit nurses who worked on evening, night, and weekend shifts as well as those staff who worked the day shift. The research was briefly described to the participants, who were then asked if they were willing to participate in a study on quality of work life among mental health nursing staff. All willing participants were then presented with a brief written explanation of the purpose and procedures of the study (Appendix D), and provided with a secluded location on the unit to complete the questionnaire.

The questionnaire took approximately 20 to 30 minutes to complete, during which time the researcher was available in the unit to address potential questions from the participants. Each completed questionnaire was returned to the researcher in an unmarked sealed envelope, which, once sealed, could not be associated with a particular participant. Confidentiality was assured and the participants were not asked to submit their names on any of the survey instruments. A list of participants' names was not maintained and no individual participant was associated with a specific survey. Participants were asked to complete only one questionnaire to prevent multiple submissions from any one individual. Consent forms were not used, as submission of a completed survey implied that participation was consensual. Participation in the study was completely voluntary and individuals could withdraw at any point prior to the submission of the envelope containing a completed questionnaire.

Data Analyses

The research data were analysed using the Statistical Package for Social Sciences (SPSS version 10.0). Descriptive statistics were used to compose a descriptive profile of the participants. Mean, range, and standard deviation were compiled for each continuous

variable. Cronbach's alpha was recorded for all instruments to assess internal consistency. Before the regression analysis was performed, cross-tabulations and bivariate correlations were conducted on all the study variables. Due to the ordinal nature of the data in this study, the strength and direction of the relationships among the variables were determined by the non-parametric Spearman's rank-order correlation coefficient (Spearman's rho). The Spearman's rho test was used to describe the magnitude and direction of the relationship between the study variables. Spearman's rho is less sensitive to extreme values than the standard Pearson correlation coefficient and was the most appropriate test for this data analysis. To interpret Spearman's rho, two variables are highly positively correlated (r_s scores approaching +1) if low-ranked values of one variable are almost always associated with low-ranked values of the other. Two variables are highly negatively correlated (r_s scores approaching -1) if the low-ranked values of one variable are almost always associated with high-ranked values of the other variable. Variables that are not correlated will have a correlation coefficient approaching zero.

Multiple linear regression analysis (hierarchical enter approach) was used to assess whether job satisfaction, role conflict, role ambiguity, workload, social support, age, education, work experience, and the perception of personal safety were significant predictors of burnout in this sample of mental health nurses. Because burnout is considered a composition of three dimensions (emotional exhaustion, depersonalization, and personal accomplishment), each dimension was used as the dependent variable for three separate regression analyses. The assumptions of multiple linear regression techniques were addressed, and given the study data a significance level of 0.05 was reported.

Ethical Considerations

In accordance with the accepted ethical considerations for research concerning humans, this study received approval from the Human Investigation Committee of Memorial University (Appendix E) and the administration of the hospital in which the study took place (Appendix F) prior to commencing. Participation in the study was voluntary and the participants could withdraw at any point prior to submitting the sealed envelope containing the completed questionnaire, at which time their involvement in the study was considered completed. The participants learned of the study via their Division Manager and posters placed in each unit. Later, participants were provided with a cover letter explaining the study and the requirements for participation in the research. Completion and submission of the questionnaire was considered to imply consent on behalf of the participant; therefore separate consent forms were not required. The researcher was present and available for questions while the surveys were being completed. Confidentiality was maintained by having the participants place the completed questionnaires in a sealed envelope. The researcher was unable to relate a given questionnaire to a specific participant. The completed questionnaires and data files were locked in a secure filing cabinet in a room accessible only by the researcher. The SPSS data file and surveys will be maintained for five years after publication of the study findings.

Chapter 4

Results

This chapter consists of four sections. The first section describes the study sample. The second section provides descriptive statistics for the study variables. The third section presents bivariate correlations of the study variables and Cronbach's alphas for the measures used in this study. The final section describes the results of the regression analyses for the predictors of the three dimensions of burnout: emotional exhaustion, depersonalization, and personal accomplishment.

Descriptive Statistics

Study Sample

Table 1 summarizes key individual characteristics of the study sample. The majority of the participants were female (61.7 %) with an average age for the total sample of 40.9 years. A little more than 40% of the participants had some college-level education (42.1%) and 14.9% reported having completed four years of college. Just under a quarter of the participants reported completion of some post-graduate work or a degree (22.8%). For comparison, national data indicate 32.1 % of the registered nursing workforce have a baccalaureate degree or advanced university preparation (Canadian Institute for Health Information, 2004). Educational data were unavailable for licensed practical nurses nationally. Licensed practical nurses (L.P.N.s) represented 52.6% of participants of this study, whereas registered nurses (R.N.s) made up 38.6%. Comparatively, national data indicate that of the entire regulated nursing workforce L.P.N.s comprise 20.1% of the

workforce, whereas, R.N.s represent 78.2% (Canadian Institute for Health Information, 2004). All but two of the participants identified the mental health setting as their primary area of employment (96.5%). The average number of hours of work per week was 37.7 and the majority of the participants reported that they worked more than 35 hours per week (90.4%) – in other words the equivalent of full-time employment. Comparatively, national data indicate that of the entire regulated nursing workforce 53.5% are employed on a full-time basis (Canadian Institute for Health Information, 2004). For this study, the average number of years for work experience in the current position was 13.4 years with exactly half the participants reporting more than 14 years of experience.

Table 1
Individual Characteristics of the Sample (n=114) [1]

Characteristic	n	%	mean	SD
Gender				
Male	44	38.3	-	-
Female	71	61.7	-	-
Age	114	-	40.9	7.5
Highest level of schooling completed				
Completed high school	11	9.6	-	-
Some College	48	42.1	-	-
Completed four years of college	17	14.9	-	-
Some post-grad work or degree	26	22.8	-	-
Other	12	10.5	-	-
Highest degree received				
B.A./B.S.	5	4.4	-	-
R.N.	44	38.6	-	-
L.P.N.	60	52.6	-	-
Ed.D.	2	1.8	-	-
Other	3	2.6	-	-
Primary area of work				
Medical	2	1.8	-	-
Mental Health	110	96.5	-	-
Other	2	1.8	-	-
Hours of work per week	114	-	37.7	8.0
Participants working more than 35 hours/week	103	90.4		
Work experience in years	114	-	13.4	7.6

[1] One participant did not provide individual/work-related information.

Burnout

The Maslach Burnout Inventory (MBI) was used to measure the three dimensions of burnout. Table 2 indicates the sample mean scores and standard deviations for the three dimensions of burnout for this study and the scores among the mental health occupational group as reported by Maslach et al. (1996). While the scores for emotional exhaustion and depersonalization for the study sample are higher than the scores cited by Maslach et al., they are within one standard deviation of the mean reported in the *Maslach Burnout Inventory Manual.* The mean score for personal accomplishment is very similar to the mean cited by Maslach et al. (1996).

Table 2

Means and Standard Deviations for the Maslach Burnout Inventory Scores

Dimension		cited by Maslach (1996)[1]	sample
Emotional exhaustion	mean	16.89	21.90
	S.D.	8.90	13.37
Depersonalization	mean	5.72	9.31
	S.D.	4.62	7.18
Personal accomplishment	mean	30.87	30.62
	S.D.	6.37	9.94

[1] for the Mental Health workers occupation subgroup

Although Maslach suggests that burnout be conceptualized as a continuous variable, she also distinguishes between low, moderate, and high degrees of burnout, as measured on the three subscales of the MBI. In particular, Maslach et al. (1996) suggest that among mental health workers, a score higher than 20 for emotional exhaustion is

regarded as high, while a score less than 13 is considered low. A total of 51 (44.7%) of the participants in this study scored in the high range for emotional exhaustion and 37 (32.5%) scored low. Similarly, a score greater than 7 for depersonalization is considered high, while a score of 4 or less is considered low. In this study, 49.1% (n = 56) of the participants scored high and 34.2% (n = 39) scored low for depersonalization. With respect to the dimension of personal accomplishment, Maslach suggests that a score of 34 or greater is considered high and a score of 28 or less is viewed as low. In this study, 38.9% (n = 44) of the participants scored high for personal accomplishment and 45.1% (n = 51) scored low. Overall, these results suggest that approximately 40% of the sample fell within the high category for each of the three dimensions of burnout. The results are summarized in Table 3.

Table 3

MBI Scores by Category

Dimension	Low		Average		High	
	n	%	n	%	n	%
Emotional exhaustion	37	32.5	26	22.8	51	44.7
Depersonalization	39	34.2	19	16.7	56	49.1
Personal accomplishment	51	45.1	18	15.9	44	38.9

Maslach et al. (1996) contends that a high level of burnout is typified by high levels of emotional exhaustion and depersonalization and a low level of perceived personal accomplishment. As cross-tabulation is an effective method for determining specific subsets of a sample when examining two or more variables, this technique was

used to identify the proportion of the study sample that were experiencing low, average, and high degrees of burnout. The results of the cross-tabulation are presented in Table 4.

Table 4
Cross-tabulation of the Three Dimensions of Burnout (n = 111)[1]

Personal accomplishment			Depersonalization: Low n (%)	Depersonalization: Average n (%)	Depersonalization: High n (%)
Low	Emotional exhaustion	Low	17 (15.3)	6 (5.4)	
		Average	7 (6.3)	3 (2.7)	5 (4.5)
		High	1 (0.9)	2 (1.8)	9 (8.1)
Average	Emotional exhaustion	Low	3 (2.7)	1 (0.9)	3 (2.7)
		Average	1 (0.9)	2 (1.8)	
		High	1 (0.9)	1 (0.9)	6 (5.4)
High	Emotional exhaustion	Low	4 (3.6)	1 (0.9)	2 (1.8)
		Average	2 (1.8)	1 (0.9)	4 (3.6)
		High	3 (2.7)	1 (0.9)	25 (22.5)

[1] Four participants did not complete the MBI in its entirety

A total of nine participants (8.1%) scored high for emotional exhaustion and depersonalization, and low for personal accomplishment, the combination of the three dimensions that Maslach et al. (1996) consider to reflect a high degree of burnout. Therefore, the rate of burnout in this sample of mental health nurses is 8.1%. The mean

and standard deviation for the three dimensions of burnout and each of the predictors of burnout used in this study are presented in Table 5.

Job satisfaction

Job satisfaction was measured using a five-point Likert-type scale, with responses ranging from (1) "strongly disagree" to (5) "strongly agree". The sample mean for job satisfaction was 3.14 and the standard deviation was 0.77. Only 10.6% of the participants scored 2.0 or less for job satisfaction, which indicates that these individuals were dissatisfied with their job. Conversely, 12.3 % scored 4.0 or higher for job satisfaction, indicating that they were satisfied with their job.

Role ambiguity

Role ambiguity was measured using a seven-point Likert-type scale. Possible responses ranged from (1) "strongly disagree" to (7) "strongly agree". The sample mean for role ambiguity was 3.02 and the standard deviation was 1.12. More than half of the sample (55.7%) scored 3.0 or less for role ambiguity, indicating that the majority of the sample was not experiencing confusion about their work role. Only 7.0% of the sample scored 5.0 or higher, which indicates that only a few participants were experiencing a degree of role ambiguity.

Role conflict

A seven-point Likert-type scale was used to measure role conflict, with responses ranging from (1) "strongly disagree" to (7) "strongly agree", with higher scores reflecting a greater degree of role conflict. The sample mean for role conflict was 3.60 and the standard deviation was 1.30. Forty one percent of the sample scored 3.0 or less for role conflict, while just 15.7% scored 5.0 or higher. These results indicated that only a small portion of the sample was experiencing role conflict at work.

Workload

Workload was measured using a five-point scale. Possible scores ranged from (1) "hardly any" to (5) "a great deal", where higher scores suggest a high level of perceived workload. The sample mean for workload was 3.48 and the standard deviation was 0.64. Nearly one in five of the participants (18.3%) scored 4.0 or higher, which suggests that they feel they have a heavy workload.

Social support

Social support was measured on a five-point scale on which higher scores suggested more perceived support from colleagues and supervisors. The original instrument was modified to exclude questions about family and friends in order to measure just the social support from co-workers and supervisors. The sample mean for social support was 3.69, and the standard deviation was 0.75. Almost one third (31.3%)

of the participants scored 4.0 or higher, suggesting they perceived some support from their colleagues at work.

Perception of personal safety

The perception of personal safety was measured using a five-point Likert-type scale with possible scores of (1) "strongly disagree" to (5) "strongly agree". A higher score reflects more concern for personal safety in the workplace. The sample mean for personal safety was 3.72 and the standard deviation was 0.85. More than one third of the participants (35.7%) scored 4.0 or higher, indicating they had concerns for their personal safety.

Table 5

Mean and Standard Deviation for the Study Variables

Variable	Mean	SD
Emotional exhaustion	21.90	13.37
Depersonalization	9.31	7.18
Personal accomplishment	30.62	9.94
Job satisfaction	3.14	0.77
Role ambiguity	3.02	1.12
Role conflict	3.60	1.30
Workload	3.48	0.64
Social support	3.69	0.75
Perception of personal safety	3.72	0.85
Age	40.86	7.54
Education	-	-
Work experience	13.41	7.55

Bivariate Correlations

This section examines the correlations between the study variables. The Spearman's rho and Cronbach's alpha values are presented in Table 6.

Table 6

Spearman's rho Correlations and Cronbach's Alpha Values

	Emotional exhaustion	Depersonalization	Personal accomplishment
Emotional exhaustion	.94		
Depersonalization	.71**	.80	
Personal accomplishment	-.49**	-.47**	.85
Job satisfaction	-.53**	-.40**	.47**
Role ambiguity	.48**	.50**	-.50**
Role conflict	.62**	.56**	-.44**
Workload	.27**	.06	.03
Social support	-.36**	-.35**	.44**
Perception of personal safety	.49**	.44**	-.21*
Age	-.09	-.28**	.06
Education	.12	.05	.01
Work experience	-.06	-.25**	-.06

** Correlation is significant at the .01 level (2-tailed)
* Correlation is significant at the .05 level (2-tailed)
Cronbach's alphas are shown on the diagonal

Table 6 cont.

Spearman's rho Correlations and Cronbach's Alpha (α) Values

	Job satisfaction	Role ambiguity	Role conflict	Workload	Social support	Perception of personal Safety	Age	Education
Job satisfaction	.79							
Role ambiguity	-.56**	.85						
Role conflict	-.54**	.61**	.87					
Workload	-.27**	.08	.35**	.87				
Social support	.57**	-.57**	-.42**	-.21*	.88			
Perception of personal safety	-.49**	.38**	.54**	.21*	-.32**	.91		
Age	.01	-.14	-.08	-.05	.16	-.16		
Education	.03	.01	.11	.10	-.05	-.07	-.14	
Work experience	-.07	-.09	-.02	-.10	.05	-.07	.58**	-.19*

** Correlation is significant at the .01 level (2-tailed)
* Correlation is significant at the .05 level (2-tailed)
Cronbach's alphas are shown on the diagonal

Emotional exhaustion, depersonalization, and personal accomplishment

Emotional exhaustion was significantly and positively correlated with depersonalization ($r_s = .71$, $p < .01$), and negatively correlated with personal accomplishment ($r_s = -.49$, $p < .01$). Emotional exhaustion was also significantly and positively correlated with role ambiguity ($r_s = .48$, $p < .01$), role conflict ($r_s = .62$, $p < .01$), workload ($r_s = .27$, $p < .01$), and perception of personal safety ($r_s = .49$, $p < .01$). Emotional exhaustion was significantly and negatively correlated with job satisfaction ($r_s = -.53$, $p < .01$) and social support ($r_s = -.36$, $p < .01$).

In addition to being significantly and positively correlated with emotional exhaustion, depersonalization was significantly and negatively correlated to personal accomplishment ($r_s = -.47$, $p < .01$), job satisfaction ($r_s = -.40$, $p < .01$), social support ($r_s = -.35$, $p < .01$), age ($r_s = -.28$, $p < .01$), and work experience ($r_s = -.25$, $p < .01$). Depersonalization was also significantly and positively correlated with role ambiguity ($r_s = .50$, $p < .01$), role conflict ($r_s = .56$, $p < .01$), and perception of personal safety ($r_s = .44$, $p < .01$).

Personal accomplishment was significantly and positively correlated with job satisfaction ($r_s = .47$, $p < .01$) and social support ($r_s = .44$, $p < .01$). Personal accomplishment was also significantly and negatively correlated with role ambiguity ($r_s = -.50$, $p < .01$), role conflict ($r_s = -.44$, $p < .01$), and perception of personal safety ($r_s = -.21$, $p < .05$).

Job satisfaction

Job satisfaction was significantly, correlated with all three dimensions of burnout: negatively correlated to emotional exhaustion ($r_s = -.53$, $p < .01$) and depersonalization ($r_s = -.40$, $p < .01$) and positively correlated to personal accomplishment ($r_s = .47$, $p < .01$). Job satisfaction was also significantly correlated with social support ($r_s = .57$, $p < .01$) and significantly and negatively correlated with role ambiguity ($r_s = -.56$, $p < .01$), role conflict ($r_s = -.54$, $p < .01$), workload ($r_s = -.27$, $p < .01$), and perception of personal safety ($r_s = -.49$, $p < .01$).

Role ambiguity

Role ambiguity was moderately significantly, correlated with all three dimensions of burnout: positively correlated with emotional exhaustion ($r_s = .48$, $p < .01$) and depersonalization ($r_s = .50$, $p < .01$) and negatively correlated with personal accomplishment ($r_s = -.50$, $p < .01$). Role ambiguity was also positively correlated with role conflict ($r_s = .61$, $p < .01$) and personal safety ($r_s = .38$, $p < .01$), and negatively correlated with social support ($r_s = -.57$, $p < .01$).

Role conflict

Role conflict was significantly and positively correlated with both emotional exhaustion ($r_s = .62$, $p < .01$) and depersonalization ($r_s = .56$, $p < .01$), and negatively correlated with personal accomplishment ($r_s = -.44$, $p < .01$). Role conflict was also significantly and negatively correlated with job satisfaction ($r_s = -.54$, $p < .01$) and social

support ($r_s = -.42$, $p < .01$), and positively correlated with role ambiguity ($r_s = .61$, $p < .01$), workload ($r_s = .35$, $p < .01$), and perception of personal safety ($r_s = .54$, $p < .01$).

Workload

Workload was significantly and positively correlated with emotional exhaustion ($r_s = .27$, $p < .01$). Workload was also significantly and positively correlated with perception of personal safety ($r_s = .21$, $p < .01$) and negatively correlated with social support ($r_s = -.21$, $p < .01$).

Social support

Social support was significantly, correlated with all three dimensions of burnout: negatively correlated with emotional exhaustion ($r_s = -.36$, $p < .01$) and depersonalization ($r_s = -.35$, $p < .01$), and positively correlated with personal accomplishment ($r_s = .44$, $p < .01$). Social support was also significantly and positively correlated with job satisfaction ($r_s = .57$, $p < .01$), and negatively correlated with role ambiguity ($r_s = -.57$, $p < .01$), role conflict ($r_s = -.42$, $p < .01$), workload ($r_s = -.21$, $p < .05$), and perception of personal safety ($r_s = -.32$, $p < .01$).

Perception of personal safety

Perception of personal safety was significantly correlated with all three dimensions of burnout: positively correlated with emotional exhaustion ($r_s = .49$, $p < .01$) and depersonalization ($r_s = .44$, $p < .01$), and negatively correlated with personal

accomplishment ($r_s = -.21$, $p < .05$). Perception of personal safety was significantly and negatively correlated with job satisfaction ($r_s = -.49$, $p < .01$), and significantly and positively correlated with role ambiguity ($r_s = .38$, $p < .01$), role conflict ($r_s = .54$, $p < .01$), and workload ($r_s = .21$, $p < .05$).

Age

Age was significantly and negatively correlated with depersonalization ($r_s = -.28$, $p < .01$), and positively correlated with work experience ($r_s = .58$, $p < .01$). No other significant correlations were found for the variable age.

Education

The level of education of the participant, as measured by two categories, L.P.N. and R.N./Bachelor's degree, was significantly and negatively correlated with experience ($r_s = -.19$, $p < .05$), but with none of the dimensions of burnout or any other variable examined in this research.

Work experience

The length of time spent in the current job, as a measure of work experience, was negatively correlated with depersonalization ($r_s = -.25$, $p < .01$) and positively correlated with age ($r_s = .58$, $p < .01$).

Multiple Linear Regression Analyses

Linear regression analysis presupposes four basic assumptions about the nature of data: reliability, a normal distribution, a linear relationship, and homoscedasticity (Munro, 2005). All the measures used in this study, with the exception of the perception of personal safety measure, have been used in other studies and have documented reliability. The Cronbach's alpha was calculated for each measure (see Table 6), which indicated that the internal consistency of each study measure was acceptable. The data for each measure except education (which was coded as a dummy variable for the analyses) were checked for normal distribution by examining skewness and generating K-S values using SPSS. Only work experience appeared to have a slight bimodal distribution, but the K-S value was not significant, so the data were not transformed. All the study variables were examined for homoscedasticity and linear relationships with other study variables using scatterplots. None of the variables included in this study were found to have non-linear relationships or heteroscedasticity. The study variables were also tested for multicollinearity, a linear relationship between two of the independent variables, by measuring for tolerance. Tolerance, as reported by SPSS, is a measure of the intercorrelation of the independent variables. The more the tolerance value approaches zero the greater the intercorrelation of the independent variables (Munro, 2005). The tolerance values for the independent variables are included with each of the linear regression results. As all the tolerance values were greater than .37, there was no evidence of significant intercorrelations between the independent variables.

Multiple linear regressions (hierarchical enter method) were performed to determine the relationship between the proposed predictors (job satisfaction, role ambiguity, role conflict, workload, social support, perception of personal safety, age, education, and work experience) as independent variables and each of three dependant variables (emotional exhaustion, depersonalization, and personal accomplishment). The first block of each regression model included the best known predictors of burnout; job satisfaction, role ambiguity, role conflict, workload, social support, age, education, and work experience. The second block included these same variables and the perception of personal safety. The hierarchical, enter method is used to model the relationship between variables by first fitting a linear equation to observed data, and testing the effect of adding a new variable(s) to the model (Munro, 2005). The research questions that guided these tests were:

1. Are job satisfaction, role ambiguity, role conflict, workload, lack of social support, age, education, and work experience significant predictors of burnout in mental health nurses?
2. Is perception of personal safety a significant predictor of burnout in mental health nurses in a model that includes the best-known predictors of burnout?

Regression analysis for emotional exhaustion

The first block of the regression analysis for emotional exhaustion indicated that the predictors explained 51.9% (adjusted $R^2 = 0.52$) of the variance ($F = 14.76$, $p < 0.05$). Job satisfaction and role conflict emerged as significant variables ($p < 0.05$) in predicting the score for emotional exhaustion. The introduction of the perception of personal safety

variable in block two of the regression analysis increased the adjusted R^2 to 0.53 ($F = 13.\ 26$, $p < 0.05$). The perception of personal safety variable was not significant ($p = 0.114$). The results of the regression analyses for emotional exhaustion are presented in Table 7.

Table 7

Regression Analyses for Emotional Exhaustion (Hierarchical Enter Method)

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Adjusted R^2	Collinearity statistic
		B	Std. Error	Beta				Tolerance
1	(Constant)	22.41	13.75		1.63	0.11	.52	
	Job satisfaction	-6.05	1.94	-0.35	-3.13	0.00*		0.38
	Role ambiguity	-0.19	1.26	-0.02	-0.15	0.88		0.42
	Role conflict	4.11	1.05	0.40	3.91	0.00*		0.44
	Workload	1.82	1.71	0.09	1.06	0.29		0.68
	Social support	-0.37	1.83	-0.02	-0.20	0.84		0.44
	Age	-0.01	0.15	0.00	-0.04	0.97		0.70
	Education	-0.08	0.15	-0.05	-0.55	0.58		0.69
	Work experience	1.32	1.93	0.05	0.68	0.50		0.93
2	(Constant)	14.06	14.61		0.96	0.34	.53	
	Job satisfaction	-5.79	1.93	-0.33	-3.00	0.00*		0.38
	Role ambiguity	-0.10	1.25	-0.01	-0.08	0.94		0.42
	Role conflict	3.50	1.11	0.34	3.16	0.00*		0.39
	Workload	1.79	1.70	0.09	1.06	0.29		0.68
	Social support	-0.18	1.82	-0.01	-0.10	0.92		0.44
	Age	0.01	0.15	0.01	0.10	0.92		0.70
	Education	1.10	1.92	0.04	0.57	0.57		0.92
	Work experience	-0.08	0.15	-0.04	-0.54	0.59		0.69
Block 2	Personal safety	2.16	1.35	0.13	1.59	0.11		0.67

Regression analysis for depersonalization

The first block of the regression analysis for depersonalization indicated that the predictors explained 47.4% (adjusted $R^2 = 0.47$) of the variance ($F = 12.475$, $p < 0.05$). The first block of the analysis found that job satisfaction, role conflict, workload, and work experience were significant predictors ($p < 0.05$) of depersonalization. The introduction of the perception of personal safety variable in block two of the regression analysis did not affect the adjusted R^2 ($F = 11.214$, $p < 0.05$); however, job satisfaction was no longer a significant predictor ($p = .06$). While role conflict, workload, and work experience remained significant predictors of depersonalization, the perception of personal safety variable was not a significant predictor ($p = 0.31$). The results of the regression analyses for depersonalization are presented in Table 8.

Table 8

Regression Analyses for Depersonalization (Hierarchical Enter Method)

Model		Depersonalization						
		Unstandardized coefficients		Standardized coefficients	t	Sig.	Adjusted R^2	Collinearity statistic
		B	Std. Error	Beta				Tolerance
1	(Constant)	23.31	7.68		3.03	0.00	.474	
	Job satisfaction	-2.16	1.08	-0.23	-1.99	0.05*		0.38
	Role ambiguity	0.82	0.71	0.13	1.16	0.25		0.43
	Role conflict	2.16	0.58	0.40	3.70	0.00*		0.45
	Workload	-2.15	0.94	-0.20	-2.28	0.02*		0.69
	Social support	-0.41	1.03	-0.04	-0.40	0.69		0.44
	Age	-0.14	0.08	-0.15	-1.73	0.09		0.70
	Education	-0.25	1.07	-0.02	-0.23	0.82		0.94
	Work experience	-0.19	0.08	-0.20	-2.34	0.02*		0.69
2	(Constant)	20.25	8.24		2.46	0.02	.474	
	Job satisfaction	-2.06	1.09	-0.22	-1.90	0.06**		0.38
	Role ambiguity	0.85	0.71	0.13	1.20	0.23		0.43
	Role conflict	1.92	0.63	0.35	3.07	0.00*		0.39
	Workload	-2.13	0.94	-0.19	-2.26	0.03*		0.69
	Social support	-0.34	1.03	-0.04	-0.33	0.74		0.44
	Age	-0.14	0.08	-0.14	-1.65	0.10		0.69
	Education	-0.36	1.08	-0.02	-0.33	0.74		0.93
	Work experience	-0.19	0.08	-0.20	-2.32	0.02*		0.69
Block 2	Personal safety	0.79	0.77	0.09	1.03	0.31		0.66

Regression Analysis for personal accomplishment

The first block of the regression analysis for personal accomplishment indicated that the predictors explained 46.2% (adjusted $R^2 = 0.46$) of the variance ($F = 11.969$, $p < 0.05$). The first block of the analysis indicates that only job satisfaction and workload were significant variables ($p < 0.05$) in predicting the personal accomplishment score. The introduction of the perception of personal safety variable in block two of the regression analysis increased the adjusted R^2 to 0.47 ($F = 10.981$, $p < 0.05$) and role conflict became a significant predictor ($p = .033$), while social support came closer to being significant ($p = .064$). The perception of personal safety variable was not a significant predictor of personal accomplishment ($p = 0.157$). The results of the regression analyses for personal accomplishment are presented in Table 9.

Table 9

Regression Analyses for Personal Accomplishment (Hierarchical Enter Method)

Model		Personal accomplishment						
		Unstandardized coefficients		Standardized coefficients	t	Sig.	Adjusted R^2	Collinearity statistic
		B	Std. Error	Beta				Tolerance
1	(Constant)	-3.56	10.88		-0.33	0.74	.46	
	Job satisfaction	5.73	1.54	0.44	3.72	0.00*		0.37
	Role ambiguity	-0.76	1.00	-0.09	-0.76	0.45		0.43
	Role conflict	-1.46	0.83	-0.19	-1.76	0.08		0.44
	Workload	3.91	1.33	0.26	2.95	0.00*		0.70
	Social support	2.57	1.45	0.19	1.77	0.08		0.44
	Age	0.03	0.12	0.02	0.23	0.82		0.70
	Education	0.22	1.51	0.01	0.14	0.89		0.94
	Work experience	-0.04	0.12	-0.03	-0.31	0.75		0.69
2	(Constant)	-9.35	11.56		-0.81	0.42	.47	
	Job satisfaction	5.91	1.54	0.46	3.84	0.00*		0.37
	Role ambiguity	-0.70	0.99	-0.08	-0.70	0.48		0.43
	Role conflict	-1.90	0.88	-0.25	-2.16	0.03*		0.39
	Workload	3.93	1.32	0.26	2.98	0.00*		0.70
	Social support	2.70	1.44	0.20	1.87	0.06**		0.44
	Age	0.04	0.12	0.03	0.34	0.74		0.70
	Education	0.03	1.50	0.00	0.02	0.98		0.94
	Work experience	-0.04	0.12	-0.03	-0.32	0.75		0.69
Block 2	Personal safety	1.52	1.06	0.13	1.43	0.16		0.67

Summary

The results of this study indicate 44.70% of the sample reported a high level of emotional exhaustion, 49.10% of the sample scored high for depersonalization, and 45.10% of the sample reported a low level of personal accomplishment. However, only a small portion (8.1%, n = 9) of the mental health nursing staff in this sample exhibited what is considered to be a high level of burnout: a high level of emotional exhaustion and depersonalization, and a low level of personal accomplishment (Maslach, Schaufeli, & Leiter, 2001).

The eight known predictors of burnout (job satisfaction, role ambiguity, role conflict, workload, social support, age, education, and work experience) selected for this study demonstrated a number of significant interrelationships. Role ambiguity, role conflict, workload, social support, and perception of personal safety were all significantly correlated with job satisfaction. Aside from the significant correlations of work experience with age and education there were no other significant interrelationships among the individual variables (age, education, and work experience) measured in this sample.

Five of the variables known to be significantly correlated with burnout (job satisfaction, role ambiguity, role conflict, workload, and social support) were found to be significantly correlated with emotional exhaustion in this sample. Job satisfaction, role ambiguity, role conflict, and social support also demonstrated significant correlation with

depersonalization and personal accomplishment. The perception of personal safety was significantly correlated with all three dimensions of burnout.

The regression analyses of the three dimensions of burnout explained approximately 50.0% of the variance, and identified four significant predictors. Specifically, job satisfaction was found to be a significant predictor of emotional exhaustion and personal accomplishment, and approached significance for depersonalization. Role conflict was a significant predictor of all three dimensions of burnout. Workload was a significant predictor of depersonalization and personal accomplishment, work experience was a significant predictor of depersonalization, and social support approached significance for personal accomplishment.

The addition of perception of personal safety resulted in a small increase the adjusted R^2 value in the regression models for emotional exhaustion and personal accomplishment; however, in neither case was the perception of personal safety found to be a significant predictor of any dimension of burnout.

Chapter 5

Discussion

This chapter discusses the results of this study with reference to the original purpose and research questions and, to other research that examined similar variables and burnout. The main purpose of this research was to test a model of burnout, which included the best-known predictors of the phenomenon, within a sample of mental health nurses. The perception of personal safety in the workplace was added in order to examine whether this variable is a significant predictor of burnout once the known predictors were included in the model. This study also measured the correlations between all the study variables and identified the rate of burnout in the sample of mental health nurses employed at one psychiatric hospital in Atlantic Canada.

Burnout in Mental Health Nurses

A comparison of the mean scores for the three dimensions of burnout (emotional exhaustion, depersonalization, and reduced sense of personal accomplishment) of this sample with those reported in other studies found that they were similar to the scores of a sample of psychiatric nurses studied by Happell, Martin, and Pinikahana (2003), those reported by Vahey et al. (2004), and within one standard deviation of the scores reported by Maslach (1996) for the mental health occupational group.

As noted previously Maslach suggests that burnout be treated not as a single state, but as the intersection of three interrelated and separately measurable conditions: emotional exhaustion, depersonalization, and a sense of personal accomplishment. The

Maslach Burnout Inventory (MBI) produces one score for each dimension of burnout rather than a single total score, so a high degree of burnout, as defined by Maslach (1996), is the state wherein the individual experiences both a high level of emotional exhaustion and depersonalization, and a low level of personal accomplishment. Neither the Happell, Martin, and Pinikahana study, the Vahey study, nor any other studies reviewed in the literature, reported the rate of burnout in their samples in this manner. It is more common that the rates for each separate dimension are reported, rather than the rate of burnout as per Maslach's model. The absence of the rate of a high level of burnout in other samples and studies makes it difficult to compare the rate of burnout found in this study, with the results of other studies.

Given that not all participants in this study who scored high for emotional exhaustion also scored high for depersonalization and low for personal accomplishment, reporting the individual rates for each dimension does not accurately reflect the rate of burnout in this sample. While the separate rates for emotional exhaustion, depersonalization, and personal accomplishment found in this study were similar to those reported in the literature, this study goes further and reports the percentage of mental health nurses in this sample who were experiencing a high level of burnout. The cross-tabulation of the three dimensions of burnout indicated that 8.1% of the sample were experiencing a high level of burnout as defined by Maslach (2001). Given that burnout in nurses can have serious consequences for job performance, staff retention, and quality of care, it is a cause for concern that eight percent of the mental health nurses in this sample were experiencing a high level of burnout.

The literature on burnout also suggests that the three dimensions (emotional exhaustion, depersonalization, and sense of personal accomplishment) are related to one another. Therefore, in addition to obtaining the sample mean for each dimension, the three sub-scales were tested for interrelationships. As expected, the results of this study revealed significant correlations between the three dimensions. While these findings indicate that emotional exhaustion, depersonalization, and personal accomplishment are related, the results also demonstrate that these are three independent conditions. Specifically, none of the Spearman's correlations between any of the three dimensions, or any of the other study variables, were greater than .71, and all the measures for tolerance were greater than .37, which suggests that multicollinearity of the variables is not present. Furthermore, the regression analysis for each dimension produced a different set of predictors. If any of the three dimensions of burnout was analogous to another variable, the regression results would have reflected this and they would have been nearly identical. These findings provide support for Maslach's assertion that burnout is not analogous to emotional exhaustion, or any one particular variable or condition measured in this study. Burnout is therefore best conceptualized as a complex phenomenon, composed of, and best measured along, multiple dimensions, and therefore the most useful model of burnout will consist of a number of different predictors for each individual dimension.

This study employed the best-known predictors of burnout, and introduced a suspected predictor, in an attempt to identify the most significant predictors in this sample of mental health nurses. The results of this study indicate that the phenomenon of

burnout is a multifaceted condition that is related, but not analogous, to emotional exhaustion, depersonalization, personal accomplishment, and can be best predicted by the degree of job satisfaction, role conflict, and workload.

Best Predictors of Burnout

Job satisfaction among nurses is well researched and, as discussed in the literature review, is one of the best predictors of burnout in nurses. The results of the three regression analyses indicate that job satisfaction is a significant predictor of emotional exhaustion and personal accomplishment, and significantly related to all the other variables except the individual characteristics. These results are similar to those reported in other studies (Alimoglu & Donmez, 2005; Baruch-Feldman & Schwartz, 2002; Kilfedder, Power, & Wells, 2001; Leiter & Harvie, 1996; Leiter & Maslach, 1988; Prosser et al., 1999), and justify the inclusion of job satisfaction in any research and model of burnout within nursing. Job satisfaction is also significantly and negatively correlated with role conflict, role ambiguity, workload, and the perception of personal safety. These results are not unanticipated given that high levels of conflict, confusion, workload, and concern for personal safety are considered work stressors and would contribute to an erosion of job satisfaction. Conversely, clear expectations, policies and procedures, the presence of social support, and a low level of concern for personal safety would translate into a high level of job satisfaction. Job satisfaction is also significantly and positively correlated with social support, which suggests that higher levels of social support can contribute to higher levels of job satisfaction. The results of this study

support previous studies, which indicate that job satisfaction is a significant predictor of burnout in nurses, and provide additional evidence that job satisfaction is related in part to working conditions such as clarity of responsibilities and policies, support from co-workers, a sense of safety, and workload.

The results of regression analyses also indicate that role conflict is a significant predictor of emotional exhaustion and depersonalization. Tasks that require a nurse to act without adequate resources or in contradiction to policies or personal judgement, or that are contrary to other requests, are sources of role conflict. These results support the assertion that role conflict is probably a work stressor that directly contributes to the development of emotional exhaustion and depersonalization, and is concurrent with feelings of ambiguity and heavy workload.

In fact, the bivariate analysis indicates that role conflict is positively correlated with emotional exhaustion, role ambiguity, workload, and concern for personal safety, as well as negatively correlated with personal accomplishment, job satisfaction, and social support. In other words, participants who reported high levels of role conflict also reported high levels of role ambiguity, workload, concern for personal safety, and lower levels of job satisfaction and social support. These results are similar to those reported by Schwab and Iwanicki (1982), who reported that role conflict was positively correlated with emotional exhaustion and depersonalization. Leiter and Maslach (1988) also found that role conflict was positively correlated with emotional exhaustion. The results of this study indicate that role conflict is a significant predictor of burnout and indicates that role conflict should be included in future studies of burnout in mental health nurses.

In this study, 18.3% of the participants reported experiencing a heavy workload. The regression analyses indicate that workload is a significant predictor of depersonalization and sense of personal accomplishment in this model of burnout, which is in keeping with the literature on workload and burnout. As with role conflict, workload is likely a work stressor that directly contributes to the depersonalization of clients and to a nurse's diminished sense of personal accomplishment.

The bivariate correlations indicate that workload was positively correlated with emotional exhaustion and concern for personal safety, and negatively correlated with job satisfaction and social support. These findings indicate that participants who reported high levels of workload also reported high levels of emotional exhaustion and concern regarding their personal safety, and a low level of social support. These findings are similar to those of Pinikahana and Happell (2004), who suggested that workload represented the most significant work stressor. Increasing workload, an absence of social support, and concern for personal safety are certainly related to job satisfaction, and can help to explain a decrease in the sense of personal accomplishment among nurses. In their study of 807 nurses in the Netherlands, Gelsema et al. also found that workload (measured as work and time pressure) predicted emotional exhaustion (Gelsema, van der Doef, Maes, Akerboom, & Verhoeven, 2005). Clearly, future studies and models of burnout in mental health nurses should include workload as a known predictor.

Finally, the regression analyses conducted in this study indicted that the amount of work experience was a significant predictor of depersonalization ($p = .021$). Specifically, work experience was found to be negatively correlated with

depersonalization, which indicates that more experienced nurses score lower on the depersonalization dimension of burnout. These findings are similar to Kilfedder et al. who found significant relationships between work experience and burnout (2001), and Albar and Garcia-Ramirez (2005) who reported that professional experience was a significant predictor of emotional exhaustion in their sample of hospital nurses. These results suggest that the length of time spent in the job may provide the mental health nurse with a resistance to burnout and/or its predictors, or that there is a survivor effect where more burnout resistant nurses last longer in the profession and hence have greater work experience. Conversely, it is also possible that mental health nurses who are unable to cope with the demands of the job fail to last in the work role and leave the mental health field before becoming more experienced nurses. This attrition of nurses prone to suffer from burnout would result in the remaining, hence more experienced, mental health nurses reporting lower scores for burnout. An examination of other possibly significant correlations between work experience and the other variables could clarify the role work experience has in predicting depersonalization.

The only other variable to be significantly correlated with work experience is age. It is not unexpected that older nurses would have more work experience. This result does not help to illuminate the relationship between work experience and depersonalization. There are also findings in the literature that indicate that work experience is not associated with age and/or burnout (McCranie, Lambert, & Lambert, 1987). Given the conflicting findings of this and other research, the inclusion of work experience as a predictor of burnout in future studies among mental health nurses is warranted.

The results of this study support previous research that indicates that job satisfaction, role conflict, workload, and work experience are significant predictors of burnout in nurses, and explain nearly half of the variability of the three dimensions of burnout in this sample of mental health nurses. Future studies on burnout in nurses, and in particular mental health nurses, should include these four variables as predictors and further explore the relationship between these and other variables, including those that were not found to be significant predictors in this study.

Non-predictors of Burnout

The results of this study indicate that several of the variables used in this model are not significant predictors of any of the dimensions of burnout. Specifically, the regression analyses do not provide evidence that role ambiguity, social support, the perception of personal safety, age, or education were predictors of burnout in this sample of mental health nurses. The bivariate analyses did however indicate that these variables are correlated to job satisfaction, role conflict, workload, and work experience, the four predictors shown to have significant relationships with burnout.

The results of the bivariate correlations indicate that role ambiguity was positively correlated with emotional exhaustion, role conflict, and the perception of personal safety, and negatively correlated with personal accomplishment and social support. These findings are similar to those reported by Schwab & Iwanicki (1982), who demonstrated that role conflict and role ambiguity were significantly related to emotional exhaustion and depersonalization. These results suggest that mental health nurses who are unsure

about their role are also more likely to experience conflicting demands, report higher levels of concern for their personal safety, and experience higher levels of emotional exhaustion. These nurses are also more likely to report lower levels of social support and personal accomplishment. It stands to reason that clear roles, responsibilities, policies, and procedures, while not directly preventing burnout, can reduce role ambiguity, and perhaps role conflict and the concern for personal safety.

The bivariate correlations also demonstrate that social support is positively correlated with personal accomplishment and job satisfaction, and negatively correlated with emotional exhaustion, depersonalization, role ambiguity, role conflict, workload, and the perception of personal safety. These findings are similar to those reported in Constable and Russell (1986), who found a significant correlation between workload and social support, and the meta-analysis conducted by Melchior et al. (1997), which suggested there was a strong relationship between the absence of support from colleagues and burnout. These results are also similar to those reported by Constable and Russell (1986) and Duxbury et al. (1984), who indicated that social support reduced emotional exhaustion and depersonalization, and by Coffey and Coleman (2001), who found that a lack of support from supervisors was significantly correlated with emotional exhaustion. These results suggest that nurses who receive clear direction and assistance from supervisors and peers are more likely to report lower levels of role ambiguity and workload. So while social support was not found to be a predictor of burnout in this study, these results suggest that social support may increase job satisfaction and reduce role conflict and workload, three of the predictors of burnout.

The results of the bivariate analyses indicate that age is significantly and negatively correlated with depersonalization, which suggests that younger participants were more likely to depersonalize their clients. These results support those of Williams (1989) who reported that age was negatively correlated with depersonalization and emotional exhaustion, and to Seever (1984), who found that age was negatively correlated with depersonalization and the only variable that was significantly correlated to burnout. The results of this study support those found by Kilfedder, Power, and Wells (2001), who reported that age was negatively correlated with depersonalization. These findings are also similar to those reported by Alimoglu and Donmez (2005), who noted that younger individuals reported higher levels of emotional exhaustion and depersonalization, and lower levels of personal accomplishment, and Albar and Garcia-Ramirez (2005) who found that age was negatively correlated with emotional exhaustion. The bivariate correlations appear to indicate that older nurses are less likely to report higher levels of depersonalization and/or emotional exhaustion and hence score lower for burnout. A possible explanation for this result could be that mental health nurses who are prone to, or who develop, burnout, do not remain in the speciality or profession, so the remaining older nurses are less likely to report high levels of burnout. It is possible that younger nurses, due to a lack of experience, have not developed coping mechanisms which may eventually mitigate the development of depersonalization. This explanation could be tested by examining the relationship between work experience, as a measure of the length of time in the role, and depersonalization. In fact, the results of this study, which indicate that work experience is significantly and negatively correlated with, and a

predictor of, depersonalization, lend support to the possibility that older, more experienced mental health nurses have either developed a resistance to burnout, or are occupational survivors. Therefore, future research should include retired mental health nurses and an examination of personnel records, which could document the attrition of mental health nurses, in order to determine whether younger and/or less experienced nurses are more likely to experience high levels of burnout and ultimately leave the speciality/profession.

The results of this study also suggest that the level of education of the participant, as measured by the highest academic degree received, was not significantly correlated with, nor a predictor of, any of the three dimensions of burnout, or significantly correlated with any other variable measured in this study. This finding is contrary to the assertion made by Bartz and Maloney (1986), who found a positive relationship between education and emotional exhaustion, and by Alimoglu and Donmez (2005), who found that education was a predictor of emotional exhaustion. It should be noted that in the current study, education was measured by only two categories, L.P.N. and R.N./Bachelor's degree. In comparing L.P.N. and R.N./Bachelor's degree participants, the results of the regression models indicated that the level of nursing education did not predict any dimension of burnout. The discrepancy with Bartz and Maloney's study, which reported contradictory results, could be explained by the differences in levels of measurement used to record education, or the differences in work environments. It is also possible that the relative homogeneity of the sample used in this study (over 50% L.P.N.s and nearly 40% R.N.s/Bachelor's degrees) is obscuring a relationship between the level

of nursing education and burnout. Studies employing samples with a greater range of educational levels, or measuring education at a ratio level, are needed to determine whether mental health nurses who possess higher levels of education (e.g. post-graduate degrees) are more or less likely to experience burnout.

Unlike other studies cited in the literature review, the findings of this study did not indicate that role ambiguity, social support, age, and education were significant predictors of burnout in this sample of mental health nurses. The differences between the results found in this study and those cited in other research may be explained by differences in populations, occupations, sample sizes, sampling, or other study variables. For example, social support in the workplace may be notably higher or entirely absent in different occupations and work/social cultures. Research conducted among occupations in which support from colleagues is expected and encouraged may yield results that indicate social support to be a significant predictor of burnout. Likewise, organizations which provide clearly defined roles, responsibilities, policies, and procedures, may report much lower levels of role ambiguity among their employees. In these organizations, role ambiguity, which is significantly correlated with job satisfaction and role conflict – two predictors of burnout – may be found to be a significant predictor of burnout. Finally, in cultures and occupations where there is a much greater range of education within the staff, the level of education could a predictor of one or more of the dimensions of burnout. Similarly, research that uses other methods, including differing data collection techniques, may produce different results. An example would be studies that use organizational records of job performance as a measure of role conflict and/or role

ambiguity. Although the results of this study indicate that role ambiguity, social support, age, and education are not predictors of burnout, these variables have been shown to have significant correlations with the known predictors and should therefore be included in future studies of burnout among mental health nurses, especially those employing different methodologies.

Personal Safety as a Predictor

Nearly half (48.2%) of the participants in this study had high scores (> 4.0) for the perception of personal safety measure that indicated they had concern for their personal safety in the workplace. These results support those reported in Burnard et al. (2000) and Dallender et al. (1999), who suggested that working with mentally ill clients is very stressful and creates a high level of mental strain. Additionally, Needham et al. (2004), Crabbe et al. (2002), Nolan et al. (2001) reported that nurses were more often subject to violent acts and reported correlations between violence, as experienced by nurses, and emotional exhaustion. In their recent study of aggression toward health care staff in a UK general hospital, Winstanley and Whittington (2004) found that as many as 43% of the nurses had been subject to aggression in the previous year.

Given that the literature indicates that the perception of personal safety in the mental health care setting is a potential stressor and possibly a predictor of burnout, this study introduced the perception of personal safety as a predictor of burnout in mental health nurses. The hypothesis is that nurses who feel less safe in their work environment are more likely to experience a higher level of burnout. As previously discussed, the

literature suggests that the risk of harm and violence is higher within the mental health field, and thus the expectation was that the perception of personal safety would be a predictor of burnout for mental heath nurses. As well, a relationship between personal safety and burnout has been reported in other studies, including Evers et al. (2002), whose cross-sectional study demonstrated that aggression directed toward caregivers was a significant predictor of emotional exhaustion. Crabbe et al. (2002), Whittington (2002) have also provided evidence of a relationship between personal safety and emotional exhaustion in nurses. However, Crabbe et al. noted that this is an area of research that has yet to be sufficiently explored. The results of the regression analyses in this study did not indicate that the perception of personal safety was a significant predictor of any of the dimensions of burnout in this sample of mental health nurses.

The results of this study did, however, indicate that the perception of personal safety is related to other variables that have been shown to be predictors of burnout. In fact, the perception of personal safety is significantly and negatively correlated with job satisfaction, and significantly and positively correlated with role conflict and workload. It is possible that a high level of concern for personal safety can adversely affect the level of job satisfaction, which in turn predicts burnout. It is also possible that a concern for personal safety creates, or contributes to the development of role conflict during times when a nurse is assigned tasks that are perceived to be potentially dangerous. Lastly, a constant concern for personal safety may contribute to a high level of workload by adding to work demands, which in turn can increase the development of depersonalization and reduced personal accomplishment. Thus, while the perception of personal safety is not a

significant predictor of burnout in this sample of mental health nurses, it is possible that it is a significant element of job satisfaction, role conflict, and workload. This antecedent relationship of the perception of personal safety with job satisfaction, role conflict, and workload is illustrated in figure 4.

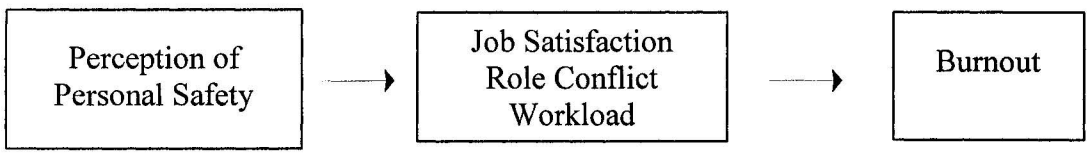

Figure 4. Perception of Personal Safety as an Antecedent

This model of the relationship between the perception of personal safety and job satisfaction, role conflict, and workload, and the results of this study, indicate that future research on burnout in mental health nurses should include the perception of personal safety as an antecedent of some of the known predictors of burnout.

While the perception of personal safety is not a predictor of burnout, the evidence from the literature and from this study is that it is an important issue for mental health nurses. Furthermore, this study demonstrated significant correlations between the perception of personal safety and a number of other variables, including job satisfaction, role conflict, and workload, which *were* predictors of burnout. Future research that further explores the nature of the relationships between the perception of personal safety and the predictors of burnout needs to be undertaken. Additionally, future studies should

broaden the concept of personal safety to include other facets of the variable (e.g. psychological safety etc).

Summary

The results of this research indicate that only a small segment of the sample (8.1%) were experiencing a high degree of burnout as defined by Maslach and measured by the MBI (high emotional exhaustion, high depersonalization, and low personal accomplishment). While the rates for the three dimensions of burnout are similar to those reported in the literature, the overall rate for burnout cannot be compared as no other studies report a rate for burnout per se. If the rate of burnout among nurses is to be compared from study to study, future research on burnout should report a rate for the proportion of the sample that is experiencing high levels of emotional exhaustion and depersonalization, and a low level of personal accomplishment.

The results of the regression analyses indicate that job satisfaction and role conflict were significant predictors of emotional exhaustion; that role conflict, workload, and work experience were significant predictors of depersonalization; and that job satisfaction, role conflict, and workload were predictors of personal accomplishment. The other variables included in this model were not found to be significant predictors of burnout. These results suggest that future models of burnout in mental health nurses should include job satisfaction, role conflict, workload, and work experience. Furthermore, future research on burnout should examine the occupational and personal characteristics that predict these four predictors of burnout.

While the regression analyses did not indicate that role ambiguity and social support were predictors of burnout, the results of the bivariate analyses did indicate that role ambiguity and social support were correlated to job satisfaction, role conflict, and workload, findings that are in keeping with the existing literature on burnout. The variables of age and education were not found to be significant predictors of any dimension of burnout, but both were significantly correlated with work experience, and age was significantly correlated with depersonalization.

The perception of personal safety, which was introduced as a suspected predictor, was not found to be a significant predictor of any dimension of burnout in this model. The bivariate correlations, however, demonstrate significant relationships between the perception of personal safety variable and the three dimensions of burnout and the four variables that were shown to be significant predictors of burnout (job satisfaction, role conflict, workload, and work experience). These results suggest that the perception of personal safety in the workplace is correlated with the predictors of burnout and may be an antecedent of job satisfaction, role conflict, workload, work experience, or other variables related to burnout that were not measured in this study. Future research on burnout among mental health nurses should examine the relationship between the perception of personal safety and the predictors of burnout. Specifically, the perception of personal safety should be explored as an antecedent of job satisfaction, role conflict, and workload.

Chapter 6

Limitations and Implications

This chapter presents a discussion of the limitations and implications of the study and its findings. The first section summarizes the limitations of the study. The second section presents the implications of this study's results for nursing practice, education, and theory and research.

Limitations of Findings

Although efforts were made to ensure the accuracy of the study findings, some limitations of this research must be noted. As nursing research (and not unlike social science research), this study must contend with issues pertaining to common method bias, wherein the instruments being used can affect the scores being collected (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Common method bias is a methodological artefact wherein the participants' responses are a result of the measurement method. For example, in this study, the exclusive use of self-reported surveys using five-and-seven point scales could result in responses that reflect a participant's inclination to respond with the same score on each question and instrument (e.g. all 3s or all "neutral"), rather than a measure of the participant's actual job satisfaction or perception of personal safety. Further, when variables are measured using a Likert-type scale, some participants may opt toward extreme responses, which could skew the study results. Extreme responses do not seem to be a problem in this study, given the normality of the responses for each of the study's measures.

Additionally, this study employed a small non-probability sample of self-selected participants. Since all the participants essentially volunteered for the study, by returning completed questionnaires, the possibility of response bias means the study results should be interpreted with caution, as nurses who chose not to participate may be functionally different (e.g., have different levels of job satisfaction, role conflict, burnout, etc.) from those who participated. Also the phenomenon of social desirability could have caused some participants to provide responses they thought were anticipated by the researcher. It is also important to note that L.P.N.s and R.N.s were not examined as separate groups in this research. Due to the sample size both groups were examined together. It is possible that L.P.N.s and R.N.s may differ in their perceived control over work and the work environment and this is a weakness of this study.

Lastly, the study sample was drawn from a single hospital in Atlantic Canada and was not a random sample; therefore the results can not be generalized for other institutions, other regions in Canada, or other countries. The use of cross-sectional data limits the ability to draw causal inferences from the findings and may represent the participants' perception at one specific moment, thereby failing to reflect changes over time. In this particular study, the data collection took place eight months after a lengthy strike by two labour unions representing the unionized L.P.N.s and other hospital support personnel. This job action involved a significant portion of the study participants. The data collection also occurred during a time of significant organizational restructuring. The influence of the job action and organizational restructuring on the responses of the study participants, at the time the surveys were completed, may have had an effect on the

results, but this was not examined.

There are also two limitations that should be noted with respect to the study instruments. First, the MBI demographic data instrument that was used in this study was developed for use with an American population and hence the questions concerning the level of nursing education (e.g. B.Sc., B.N., and L.P.N.) caused some reporting error due to differences between US and Canadian credentials (e.g. College versus University attendance, post-graduate versus post-diploma etc.). The extent to which confusion about nursing credentials affected the results is unknown. Second, this is the first study to employ this perception of personal safety instrument, so comparison of the results of this study with other studies on the perception of personal safety among mental health nurses is not possible. It should be noted that the Cronbach's alpha for the perception of personal safety instrument was .91, which indicates good internal consistency. This score indicates that the questions on the instrument all measure the same underlying construct.

It must also be noted that the concept of burnout itself is still under discussion. Researchers continue to clarify the differences between burnout and other mental states, such as anxiety and depression, as well as the aetiology of the phenomenon. While Maslach's definition of burnout currently prevails in the research, there are competing definitions and theories with associated instruments that differ from the Maslach Burnout Inventory (Demerouti, Bakker, Nachreiner, & Schaufeli, 2000; Shirom & Ezrachi, 2003). Therefore, comparisons between studies utilizing different definitions of burnout and instruments are problematic.

Lastly, even within studies which use the MBI, there are differences in methods

for reporting the rate of burnout, which makes comparison of these findings difficult. This research reported the proportion of participants who scored high for emotional exhaustion and depersonalization, and low for personal accomplishment – those experiencing a high level of burnout as defined by Maslach (2001). While this approach to reporting burnout is a strength of this study, most other studies that utilize the MBI report the rates for high levels of emotional exhaustion, and/or depersonalization, and/or low levels of personal accomplishment, as separate measures. These studies therefore report a rate of burnout in the study sample based on one or two dimensions rather than the intersection of all three dimensions. This difference in how burnout is reported in this study makes it challenging to compare the rate of high levels of burnout found in different samples and reported in other studies. Nevertheless, since Maslach asserts that burnout is a continuum that has three dimensions, this study examined the predictors of each of the three dimensions, treating each as a continuous variable, similar to other studies on burnout.

Despite the aforementioned limitations of the study findings this research adds to what is currently known about burnout in the nursing profession. The design, use of valid and reliable instruments, sample size, and complete and normally distributed data sets are all strengths of this work. This study makes a valuable contribution to the burnout literature.

Implications

The implications this study's findings have for nursing practice, education, and theory and research are discussed below.

Nursing practice and education

This study indicated that 8.1% of the sample were experiencing a high level of burnout at the time of the study. As burnout has been demonstrated to be correlated with job performance, staff retention, and client care, nurse managers and health care administrators must be cognizant of the organizational and individual characteristics that predict burnout among mental health nurses.

This study adds to the body of knowledge about the predictors of burnout among mental health nurses. Nursing supervisors, managers, and administrators need to be educated about the predictors in order to more effectively reduce the rate of burnout in mental health nurses. Specifically, managers and administrators should work to maintain high levels of job satisfaction, set clear and consistent workplace policies and procedures, ensure that staff members have adequate time to perform requisite duties, and attempt to maintain a reasonable workload. They should also be aware of the other study variables that were demonstrated to be correlated with the three dimensions of burnout, specifically role ambiguity, social support, and the perception of personal safety. Nurse Managers should endeavour to reduce ambiguity in the workplace by establishing clear expectations, foster collegial support among the employees, and ensure a safe and secure environment for both the mental health care staff and consumers.

Nurse Managers should endeavour to dialogue with staff members who exhibit low levels of job satisfaction in order to address personal and organizational factors related to low satisfaction (e.g., role ambiguity, role conflict, workload, social support, and perception of personal safety). Furthermore, health care organizations could emphasize and support the development of innovative practices for encouraging a satisfied workforce.

Nurse Managers and supervisors should also strive to recognize the serious implications of having staff working in an environment wherein they have high levels of concern for their personal safety. In mental health nursing in particular, the unrelenting stress posed by a concern for personal safety can adversely affect job satisfaction and potentially lead to burnout. Opening a dialogue with nursing staff can help to identify areas of concern for personal safety and thus lead to the development of appropriate policies, procedures, and protocols for creating a safe and secure work environment.

Finally, Nurse Managers and nurse educators should ensure that nursing staff and students are able to recognize organizational and personal characteristics that predict burnout. Employees and students should be taught the importance of positive coping mechanisms (e.g. conflict resolution and healthy diet and exercise regimes) and how to foster these throughout their career. Nurses should endeavour to take an active role in developing solutions that address the predictors of burnout in the workplace. Specifically, there is evidence that the development of, and participation in, skill-development training, stress reduction programming, and peer support programs can alleviate burnout in hospital staff (Cohen-Katz, Wiley, Capuano, Baker, & Shapiro, 2004; Cohen & Gagin,

2005; Davis & Thorburn, 1999).

In turn, mental health nurses themselves can, once educated about burnout and its predictors, actively strive to prevent its development. Individual nurses can question ambiguous or conflicting expectations, policies, or requests. They can also endeavour to create a safe and supportive working environment by offering sincere support for their colleagues. Finally, once aware of the phenomenon, nurses can in turn educate less-experienced peers about burnout and the impact it can have in their workplace and on their own job performance and mental well-being.

Theory and research

This research provides further evidence that burnout is a complex phenomenon that results from multiple organizational and personal factors. It demonstrates that job satisfaction, role conflict, workload, and work experience are significant predictors of at least one or more of the three dimensions of burnout among mental health nurses. Specifically, the results of this study indicate that role conflict is a significant predictor of all three dimensions of burnout, job satisfaction is a significant predictor of emotional exhaustion and depersonalization, while workload is a significant predictor of depersonalization and personal accomplishment, and work experience is a significant predictor of depersonalization. While role ambiguity, social support, and the perception of personal safety were demonstrated to be correlated with all three dimensions of burnout and their predictors, they were not significant predictors themselves. Future research should attempt to identify the nature of the relationships between these variables and the predictors of burnout. More advanced methods, such as structural equation

modelling, may yield clear results that illustrate the relationships between role ambiguity, social support, and the perception of personal safety and burnout. Advanced types of modelling can be useful in exploring relationships (e.g. mediation/moderation effects) among variables.

While this research demonstrated that the perception of personal safety is not itself a predictor of burnout, it was found to be correlated with three of the significant predictors. Therefore, in order to better understand how the perception of personal safety is related to job satisfaction, role conflict, and workload, future studies of mental health professionals should include the perception of personal safety as a study variable. In particular, the perception of personal safety should be tested as an antecedent of job satisfaction in a model of burnout (see Chap. 5, Figure 4). Research that tests this model of burnout may illuminate the role of perception of personal safety in a model of burnout. Future studies would also benefit from expanding the personal safety variable to include types of safety beyond physical (e.g. psychological safety etc).

Future research on both burnout and its predictors among mental health nurses should also include longitudinal studies. Longitudinal research would contribute to our understanding of the development of the organizational and personal characteristics that predict burnout over time. This research method could provide evidence for the predictors of burnout and might assist in identifying the length of time required for burnout to develop among mental health nurses. It may also be interesting to longitudinally explore whether length of time spent in the job provides the mental health nurse with a resistance to burnout and/or its predictors, or whether or not there is a

survivor effect where more burnout resistant nurses last longer in the profession and hence have greater work experience.

Furthermore, future research on burnout should continue to examine the differences between nursing specialities and within different cultures. Differences in the working conditions and stressors in different nursing environments, specialities, and cultures may result in different antecedents, predictors, and moderators to burnout. These comparisons are required to explore the unique characteristics that predispose nurses in different specialities and geographical areas to burnout.

Finally, there is a paucity of qualitative research related to burnout. Therefore, future studies that explore the lived experience of mental health nurses suffering from burnout can complement the quantitative research. They are necessary in order to fully appreciate the phenomenon from the nurses' perspective.

Conclusion

This study tested a model of burnout that included the eight best-known predictors of burnout and introduced a variable, the perception of personal safety. The study findings indicate that job satisfaction, role conflict, workload, and work experience were significant predictors of the three dimensions of burnout, which explained approximately 50% of the variance in the study model. Specifically, job satisfaction and role conflict were significant predictors of emotional exhaustion. Role conflict, workload, and work experience were significant predictors of depersonalization, while job satisfaction, role conflict, and workload were the significant predictors of personal accomplishment. The

perception of personal safety variable was found to be significantly correlated with all three dimensions of burnout, and with job satisfaction, role ambiguity, role conflict, workload, and social support. However, the perception of personal safety was not found by itself to be a significant predictor of burnout in this.

This study found that 8.1% of the mental health nurses who participated in this research were experiencing a high level of burnout, as measured by high levels of emotional exhaustion and depersonalization, and a low level of personal accomplishment. As this is the only study known to report a high level of burnout rate in this manner, it is one of the strengths of this study. The finding that one out of every eleven or twelve mental health nurses is experiencing a high level of burnout warrants future research on burnout in this occupation. Future research on burnout among mental health nurses should include examinations of job satisfaction, role conflict, workload, and work experience as predictors of burnout. The inclusion of the perception of personal safety as a suspected predictor of burnout also provides a unique contribution to the literature on burnout among mental health nurses. The relationships between the perception of personal safety and the predictors of burnout, specifically job satisfaction and role conflict, should also be explored in future research.

The results of this study also have implications for nursing practice and education. An improved understanding of the organizational and personal factors that predict the phenomenon of burnout can assist in a reduction in the rate of its occurrence among mental health nurses. In turn, a decrease in burnout may result in higher levels of retention and recruitment of professional nursing staff. At a time when the nursing

profession is aging rapidly and experiencing an exodus of experienced practitioners (Canadian Institute for Health Information, 2004), proactive solutions that enhance recruitment and retention, increase job satisfaction and job performance, and stave off burnout are necessary.

This research provides support for future directions within nursing education and research with respect to the phenomenon of burnout. Nurses, nurse managers, and nurse educators should endeavour to educate themselves and others about the organizational and personal characteristics that predict burnout. Nurses must be encouraged and empowered to question assigned tasks that conflict with their understanding of their role and responsibilities. Only through such efforts can nurses become active participants in reducing role conflict within their workplace. Administrators, Nurse Managers, and nurses should strive to create safe and supportive environments wherein the staff are able to focus their energies on caring for their clients without feeling overburdened.

Finally, researchers should continue to develop models of burnout that isolate predictors that are as yet unexplored. Such future research should include longitudinal and cross-cultural studies, as well as studies that employ a wide variety of instruments and methods. Given the negative consequences of burnout for both mental health caregivers and their clients, nurses should endeavour to incorporate the current understanding of the phenomenon, in addition to future findings, into our education, practice, and research.

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Appendix A: Study Questionnaire

Quality of Work Life Among Mental Health Nurses Instrument	
SECTION 1	
Instructions: Each of the statements below is something that a person might say about his or her job. You are to indicate your own personal feelings about your job by marking how much you agree with each of the statements. How much do you agree with the following statement?	
1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree	
1. How satisfied are you with the nature of the work you perform?	
2. How satisfied are you with the person who supervises you - your organizational superior?	
3. How satisfied are you with your relations with others in the organization with whom you work-your co-workers or peers?	
4. How satisfied are you with the pay you receive for your job?	
5. How satisfied are you with the opportunities which exist in this organization for advancement or promotion?	
6. Considering everything, how satisfied are you with your current job situation?	

SECTION 2	
Instructions: Please read the following statements about your role in the workplace and indicate how much you agree with the statements. How much do you agree with the following statement?	
1 = disagree strongly, 2 = disagree, 3 = disagree slightly, 4 = neutral, 5 = agree slightly, or 6 = agree, or 7 = agree strongly.	
1. My authority matches the responsibilities assigned to me	
2. I don't know what is expected of me	
3. My responsibilities are clearly defined	
4. I feel certain about how much authority I have	
5. I know what my responsibilities are	
6. I have clear planned goals and objectives for my job	

7. The planned goals and objectives are not clear	
8. I don't know how I will he evaluated for a raise or promotion	
9. I know what is expected of me	
10. Explanations are clear of what has to be done	
11. My boss makes it clear how he will evaluate my performance	
12. I often get myself involved in situations in which there are conflicting requirements	
13. There are unreasonable pressures for better performance	
14. I am often asked to do things that are against my better judgment	
15. I receive an assignment without adequate resources and materials to execute it	
16. I have to buck a rule or policy in order to carry out an assignment	
17. I receive incompatible requests from two or more people	
18. I have to do things that should be done differently under different conditions	

SECTION 3	
Instructions: Please respond to the following questions with the appropriate score.	
1 = rarely, 2 = occasionally, 3 = sometimes, 4 = fairly often, and 5 = very often	
1. How often does your job require you to work very fast?	
2. How often does your job require you to work very hard?	
3. How often does your job leave you with little time to get things done?	
4. How often is there a great deal to be done?	
SECTION 3 – Continued	
Instructions:	

Please respond to the following questions with the appropriate score.	
1 = hardly any, 2 = a little, 3 = some, 4 = a lot, and 5 = a great deal	
1. How much slowdown in the workload do you experience?	
2. How much time do you have to think and contemplate?	
3. How much workload do you have?	
4. What quantity of work do others expect you to do?	
5. How much time do you have to do all your work?	
6. How many projects, assignments, or tasks do you have?	
7. How many lulls between heavy workload periods do you have?	

SECTION 4	
Instructions: Please answer the following questions by indicating to what degree your immediate supervisor and co-workers provide support at work.	
1 = don't have any such person, 2 = not at all, 3 = a little, 4 = somewhat, and 5 = very much	
1. How much does each of these people go out of their way to do things to make your work life easier for you?	
A. Your immediate supervisor	
B. Other people at work	
2. How easy is it to talk with each of the following people?	
A. Your immediate supervisor	
B. Other people at work	
3. How much can each of these people be relied on when things get tough at work?	
A. Your immediate supervisor	
B. Other people at work	
4. How much is each of the following people willing to listen to your personal problems?	
A. Your immediate supervisor	

B. Other people at work	

SECTION 5		
Instructions: Please read the following statements about your perception of safety in the workplace and indicate how strongly these statements reflect your own personal safety.		
1 = disagree strongly, 2 = disagree somewhat, 3 = agree a little, 4 = agree somewhat, or 5 = agree strongly		
1.	I feel that my work environment is dangerous because of the patients I work with.	
2.	I feel unsafe at work because of the patients I work with.	
3.	I feel "on-edge" while at work, because a patient may attack me.	
4.	I am concerned for my physical safety at work because of the patients I work with.	
5.	I feel at risk to be hit by a patient.	
6.	I frequently wonder if a patient will become aggressive toward me.	
7.	I believe I could be injured by a patient at work.	
8.	I feel that my level of safety with respect to the patients I work with could be improved.	

The study questionnaire is presented here as it was provided to the participants, with the exception of the Maslach Burnout Inventory and the Maslach Human Services Demographic Data Sheet. Copyright prevents the duplication of this instrument herein.

Appendix B: Letter Sent to the Division Managers

Appendix C: Information Poster

A Study of Factors Related to the Quality of Work Life Of Mental Health Nurses

I will be visiting your unit during the coming weeks. If you are interested in participating in this study, please inform your Division Manager.

The Human Investigations Committee of Memorial University and the Health Care Corporation of St. John's have approved this study.

Thank you,

Lorelei Stanley
M.N. student
MUN School of Nursing

Appendix D: Participants Information Letter

Appendix E: Letter of Approval from the Human Investigations Committee

Appendix F: Letter of Approval from the Administration of the Study Site

Signature of Principal Investigator

_____

Lorelei Stanley, B.N., R.N.
M.N. student
MUN School of Nursing

Signature of Supervisor

_____

Dr. Alice Gaudine, Ph.D
Professor
MUN School of Nursing

Signature of Committee Member

_____

Prof. Doreen Dawe, M.Sc.
Associate Professor
MUN School of Nursing