GENDERED EXPERIENCES OF NURSING JOB DEMANDS AND RESOURCES

Katherine Barlow

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Committee:

Clare Barratt, Advisor

Margaret Brooks

William O'Brien

ABSTRACT

Clare Barratt, Advisor

Nursing is an extremely demanding occupation, with challenges ranging from physical demands of lifting and patient aggression to psychological and organizational demands of coworker incivility, time pressure, and understaffing. Past research has not answered the question of how demanding requirements are distributed between male and female nurses in this predominantly female profession. Gender theory research has indicated that men and women often have very different experiences at work due to stereotypes of masculinity, femininity, and traditional work roles. Therefore, this research utilizes the job demands and resources model to examine the different ways that male and female nurses experience negative demands, helpful resources, and physical, psychological, and attitudinal outcomes. Male nurses reported greater physical and interpersonal job demands as well as greater supervisor support than their female colleagues, while female nurses reported greater demands related to understaffing and long work shifts as well as more social support. Male nurses showed higher levels of stress, intent to leave nursing, and injury frequency, while female nurses report more frequent instances of pain. Implications for gendered occupations, health and safety, and interventions are discussed.

This thesis is dedicated to the nurse who never fails to support me.

Thanks, Mom.

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INTRODUCTION

Occupational stress is a contributing factor to decreased organizational efficiency and job satisfaction as well as increased turnover, absenteeism, and healthcare costs (Wheeler & Riding, 1994). Although exposure to chronic stress is universally harmful, employees in the nursing profession may be uniquely susceptible to greater stress and burnout due to challenging roles as caregivers. Nurses balance the health and safety of multiple patients every day at work, relying on their own abilities, support from coworkers, and organizational resources to consistently perform well in a potentially high-risk environment. Because of the unique effect stress may have in medical professions, vast amounts of research have been devoted to identifying the predictors of nursing stress and burnout, resulting in individual- and organization-level interventions.

Before these findings and interventions can be successfully utilized, however, it is imperative for scientists and practitioners to know that such findings are generalizable to all nurses. To date, little research has examined gender differences in nursing experiences, partially due to the historically smaller proportion of men in the profession. Research in other gendered industries (e.g., female pilots, male teachers) has indicated that workers in minority gender groups may have vastly different experiences at work than their majority counterparts (e.g., Germain, Herzog, & Hamilton, 2012; Martino, 2008). Although the proportion of male nurses has grown in the past several decades, shortages of nurses and especially male nurses persist; this underrepresentation may indicate that there are specific challenges for men working as nurses which prohibit further recruitment and retention of male nurses. Accordingly, qualitative studies in nursing have begun to indicate that male nurses may experience differing job demands and

resources than their female counterparts (e.g., Rajacich et al., 2013; Keogh & O'lynn, 2007; Walters et al., 1996).

By investigating the topic of gender differences in nurse experiences, this study can open the door for exploration of differing challenges, advantages, and expectations of male and female nurses, resulting in the development of more effective, targeted interventions to reduce the negative physical and psychological outcomes of occupational stress in nursing.

Nursing: Demanding Work

While occupational stress is a relevant concern in nearly every profession, the field of nursing has seen high turnover, recruitment challenges, and ongoing shortages which point to a need for reexamination of nurse experiences (Rosseter, 2017). Nursing remains a demanding profession across settings and job levels, with nurses frequently balancing a combination of understaffing, changing healthcare politics, difficult work environments, and physical and psychological challenges (Stein & Deese, 2004).

Organizational Demands

Time Demands. As an occupation with an ongoing fast pace, potential for emergency situations, and limited recovery time, nursing is especially susceptible to the demands of limited time. Hierarchical structures, limited flexibility, frequent attention switching, and prolonged shift work plague nurses, leading to more frequent decision regret, medical errors, and fatigue (Stock et al., 2007; Akerstedt & Wright, 2003).

Shiftwork. Like many medical professionals, nurses work in shifts to provide employee coverage for patient needs 24 hours per day. Shifts may frequently span 8 or 12 hours depending on the needs of the department. Nurses' work may not end when the shift ends, however; Rogers et al. (2004) found that 40% of nurses work shifts longer than 12 hours due to necessity of

continued care for a patient, understaffing, and shift reporting to inform incoming nurses about current patients. No federal law exists limiting hours that nurses may work in a 24-hour period, and most states have no regulations for maximum hours worked by adults. Prolonged work shifts, particularly in stressful environments, have been shown to cause poorer perceived general health, increased injury rates, greater incidence of illness, increased alcohol use, obesity, and higher mortality rates (Caruso et al., 2004). Prolonged night shifts may be particularly harmful; in 2007, the World Health Organization classified night shift work as a carcinogen due to long term ill effects of circadian disruption (Gu et al., 2015). Long shifts have also been shown to negatively affect nurse task performance and patient care at work (Fitzpatrick, While, & Roberts, 1999).

Understaffing. With clear implications for performance and health, organizations have multiple reasons to address the shortcomings of shift work. To address these needs, organizations must have sufficient staff to provide coverage for patient care at all hours. Currently, hospitals argue that they cannot fully address time demand issues without sufficient staff, an ongoing challenge given the shortage of new nurses (McKechnie, 2016). As the population continues to age, with a greater proportion past retirement age, the working population shrinks while need for medical care has grown, leaving gaps in nurse coverage (Mather, Jacobsen, & Pollard, 2015). With fewer nurses working per shift, nurses must divide time between more patients and work with less assistance, ultimately leading to higher inpatient mortality rates, longer hospital stays, and lower chances of rescue versus failure in emergency situations (Lang et al., 2004).

Attention Switching. Continuous patient care requires nurses to frequently switch tasks, maintaining attention with many interruptions and little pattern to tasks. This creates high cognitive load with little opportunity for recovery (Cornell et al., 2011). Nurses must switch

attention not only between patients but also between direct care, indirect care, medication tasks, administrative tasks, and professional communication. Nurses complete an average of 72 tasks per hour, requiring demanding task changes more than once per minute over the course of their multiple-hour shifts (Westbrook et al., 2011).

Physical Demands

Possibilities of acute and long-term injury are significant ongoing risks for nurses across many settings. Nurses may be asked to lift patients, restrain physically violent individuals, handle sharp or hazardous materials, and remain upright and physically active for prolonged periods. Nursing often requires long periods of standing or walking, causing greater incidence of low back pain and exhaustion (Roffey et al., 2010). In addition to prolonged standing, nurses are often required to lift patients individually, with a partner, or using lifting equipment (Winkelmolen, Landeweerd, & Drost, 2007). Nurses may also face exposure to illness and high-risk medications or chemicals, indicating a critical need for clear-cut safety procedures (Pender & Pender, 1980; Hon et al., 2011).

Understaffing exacerbates the demand for this type of physical work and resulting injury. Nurses with limited time and insufficient staff support may take safety shortcuts which ultimately harm them. For example, Clarke et al. (2002) found that nurses in understaffed units were 50% to 200% more likely to experience needlestick injuries or near misses than nurses working in sufficiently staffed departments. With the current shortage of nurses and environment of greater demands per nurse, musculoskeletal injuries including neck, shoulder, and back pain are increasingly prevalent, largely as a result of unmonitored physical workload demands in understaffed departments (Trinkoff et al., 2003).

Psychological Demands

Patient Interactions. Nurses work constantly in customer-facing positions, interacting with patients during periods of illness and pain (OSHA; Sauer & McCoy, 2017). As a result, nurses report facing frequent physical and verbal abuse from patients, especially in high-risk departments such as intensive care and psychiatric care (Inoue et al., 2006; Oztunc, 2006). Perceptions of nurses as having low power can lead to higher incidence of physical and sexual assault by care recipients, leading to long-term psychological and physical harm to nurses (Spector, Zhou, & Che, 2014). In addition to interactions directly with patients, nurses are required to maintain and guide positive interactions with families and friends of patients who may express concern, distress, or aggression (Sauer & McCoy, 2017).

Coworker Interactions. Although coworkers may serve as a resource when nurses face challenging situations with patients, they also may also create challenging interpersonal dynamics for fellow nurses. For example, workplace bullying by nurses is a prevalent, ongoing problem in hospitals and other medical settings (e.g., Lewis, 2006; Rocker, 2008). While explicit bullying behavior may be discouraged or punished by supervisors or the organization, more subtle social exclusion of nurses may go undetected by supervisors. Coworker incivility, or subtle forms of mistreatment like rudeness, ignoring, or gossiping about a coworker, also presents social challenges for nurses already juggling multiple job demands (Laschinger et al., 2013).

Burnout. Each of the aforementioned job demands has been shown to lead to negative outcomes, including physical and psychological changes in nurses. The concept of burnout, which grew in popularity in the 1970s, was first identified in human services employees as “a psychological syndrome in response to chronic stressors on the job” (Maslach, 2001, p. 399).

Maslach further divided burnout into three components: overwhelming exhaustion, feelings of cynicism or detachment, and feelings of reduced efficacy or lack of accomplishment. In the case of nursing, burnout is a far-reaching, ongoing problem. In a meta-analysis of intensive care unit (ICU) nurse burnout, Chuang et al. (2016) estimated ICU nurse burnout rates between 28% and 61%. With at least a quarter of nurses in the ICU sample afflicted by this problem, burnout undoubtedly influences nurses in other departments and organizations. With demonstrated effects on satisfaction levels of patients (Vahey et al., 2004), absence from work, lower self- and supervisor-rated job performance, and greater intention to quit (Parker & Kulik, 1995), burnout is certainly an outcome which research and practice should work to understand and prevent in nurses.

Resource Provision for Nurses

In coping with organizational, physical, and psychological demands, nurses rely on multiple resources provided for them by the organization, supervisors, and coworkers. These resources may range from assistive lifting equipment to autonomy and greater flexibility in their work (Hansen, Sverke, & Naswall, 2009). For example, social support from colleagues can help nurses to better process and address challenges at work, decreasing negative health outcomes (Lindholm et al., 2003). Nurse autonomy and control of resources has also been shown to benefit nurses and patients, increasing job satisfaction and patient care ratings (Rafferty, Ball, & Aiken, 2001). Supervisors can also influence how nurses cope with high job demands; positive supervisor relationships have been shown to decrease nurse stress and turnover intention while increasing job satisfaction (Hall, 2007; Galletta et al., 2011). Although the nature of nursing can make it an extremely demanding profession across settings, appropriate provision of resources can help nurses to better cope with these challenges. Conceptualizations of job experiences

should therefore consider the combined effects of job demands and resources, exploring how experiences of each may be dissimilar between different populations of nurses.

Gendered Work

Despite the growth in awareness and research on the demands and resources nurses experience, less is known about how they may differentially affect men and women in nursing. In the past few decades, research has begun to explore the effects of tokenism on minorities in the workplace. For example, Kanter's theory of tokenism argued that when minorities have less than 15% representation in an organization, they face particularly severe workplace problems (Kanter, 1977). With male nurses currently constituting approximately 10-11% of the nursing population (U.S. Census Bureau, 2013), Kanter's theory would identify men as a token group facing unique challenges which differ from their female counterparts. As the proportion of men continues to grow, with current percentages more than four times greater than in 1970, it becomes increasingly important to understand the obstacles experienced by male nurses as compared to their female colleagues.

Although past empirical studies of the specific experiences of male nurses have been limited, theories of gender in the workplace abound, pointing to factors like traditional masculinity, social expectations, and stereotyping as influential to the experience of work (Cheng, 1996). From discrimination and harassment to gender equity and social capital, research has repeatedly shown that men and women have differing experiences at work. Socially salient characteristics like gender affect performance expectations and interpretation of job performance, reinforcing gender roles and historically providing benefits to masculine men (Correll & Ridgeway, 2003; Hodges & Budig, 2010).

Theories of gender order argue that cultural beliefs about gender and masculinity are irreparably entwined within ideas about work and the "ideal employee" (Acker, 2006; Williams, 1995). For example, male workers with a greater number of characteristics fitting expectations about traditional masculinity (e.g., married, in a relationship with traditional gender roles, utilizing college degree, in careers emphasizing cognitive skills, etc.) benefit from social dominance in society and at work (Connell & Messerschmidt, 2005; Hodges & Budig, 2010).

Even in predominantly female fields like elementary school teaching and librarianship, men do not seem to experience discrimination from within the field; Williams (1992) described "the glass escalator," in which these men may be provided structural benefits as a result of their token male status. Budig (2002) similarly found that men do not suffer financially when they serve as "tokens" in a female dominated field, contradicting Kanter's predictions of tokenism as disadvantageous to the underrepresented group (Kanter, 1977). The dominant status of men may lead to "status shields," in which men in predominantly female fields are protected from some of the emotional abuses and social expectations which women face more frequently (Hochschild, 1983; Cottingham, Erickson, & Diefendorff, 2014).

Whereas masculinity may provide benefits to men working in predominantly female professions, stereotypes of men may also influence their work in negative or ambiguous ways. Fiske (1998) conceptualized stereotypes of masculinity in the stereotype content model, describing how masculinity and men are associated with higher competence but lower warmth, while women are more often perceived as having high warmth and low competence (Eckes, 2002). Lower perceived warmth may present issues for men in predominantly female professions, where expectations of positive, caring social interactions are higher (Shinar, 1975).

Gender stereotypes may also cause men to experience prejudice or ridicule from others outside their female-dominated profession. At the same time that being male might benefit them professionally, social contacts outside of nursing may perceive male nurses as less masculine due to their role in a perceived feminine profession. Men not fulfilling expectations of traditional masculinity or competence may feel pressure to compensate to maintain social dominance. In a phenomenon deemed the "He-Man Role Trap," men may take on extra physical workload in order to demonstrate or confirm dominance to others who question their competence or masculinity (Heikes, 1991).

Although this research has begun to examine the ways men may experience work differently, explorations of men's experiences in predominantly female profession are still severely lacking. Previous studies have primarily studied either gender differences in job demands or in social resources without considering their combined effect. With recent calls for better understanding of men in psychology research and practice (e.g., Pappas, 2019), exploring the holistic experiences of male nurses can lead to clearer answers about gender and social dominance, ultimately improving work and health outcomes.

Men in Nursing

While limited, preexisting research on male nurses points to the ways in which masculinity expectations affect men's work experiences. For example, the 2016 State of Nursing survey reports that 73% of male respondents hesitated to pursue a career in nursing due to stereotypes and ridicule of male nurses from those outside the profession. These stereotypes have also led men to more strongly consider careers outside of nursing, with male nurses demonstrating higher role stress and intention to quit (Lou et al., 2007). Reflecting Heikes' (1991) predictions of physical work as reinforcement of masculinity, half of male nurses report

feeling as though they were “used as muscle” or did more physical work than their female colleagues (State of Nursing, 2016).

Pressures of masculinity may shape the roles of male nurses in negative ways; however, there is also evidence for male nurses receiving structural benefits as predicted by Williams’ glass escalator theory (1992). Evans (1997) noted that disproportionate numbers of male nurses tend to be promoted into supervisory and elite positions, attributing this advantage to gender order and perceived social dominance of masculinity. Thus, comprising a smaller proportion of nurses may not cause only benefits or costs to men, instead demonstrating a more complex interaction of structural advantages and costs of maintaining masculinity perceptions in predominantly female nursing.

The Current Study

With a growing awareness of the complex interaction between gender, representation in the workplace, and work experiences, more research is needed to understand how the experiences of male and female nurses may differ as well as how these experiences lead to various psychological and physical outcomes. Therefore, this research seeks to examine the experiences of male and female nurses using the job demands and resources framework, allowing for an empirical exploration of challenges, advantages, and outcomes differentially experienced by male and female nurses.

Job Demands and Resources in Nursing

In order to mitigate the hardships faced by nurses at work, organizations must first understand both the demands faced and the resources provided to employees which together comprise their work environments. The job demands and resources (JD-R) model of burnout developed by Demerouti and colleagues (2001) provides a helpful framework for understanding

the combined effects of demands and resources on employee outcomes. According to the JD-R model, job characteristics can be categorized as either demands or resources, which differentially lead to outcomes such as burnout and engagement. Demerouti et al. demonstrated that job demands such as physical workload, time pressure, shift work, and harsh recipient contact could lead to the exhaustion component of burnout. On the other hand, job resources such as feedback, autonomy, supervisor support, and rewards can decrease negative effects of burnout and exhaustion, while lack of resources can lead to disengagement or cynicism as well as lower job performance.

Bakker's (2005) extension of this model also shows that job resources act as moderators in the job demands-burnout relationship, buffering the effects of increased demands on exhaustion. For example, in the case of high physical workload demands, provision of resources like autonomy and supervisor support can help to energize employees, lessening increases in exhaustion. Using the JD-R framework, the current research shows that male and female nurses face differing job demands and are provided different job resources. This study therefore demonstrates how gendered treatment and expectations in nursing impact burnout, turnover, and other vital outcomes for nurses through the complex interaction of demands and resources.

Differing Demands. As preliminary research suggests that men and women may experience differing challenges at work, it becomes increasingly important to fully understand which demands are borne disproportionately by one gender. Specifically, this study seeks to examine how male and female nurses experience different physical, psychological, and organizational demands. Each of these demands has been shown to relate significantly and positively to experiences of burnout, pointing to a need for better understanding of who is most at risk for each type of job demand.

Physical Job Demands. The physical work requirements of nurses, including lifting, prolonged periods of standing, restraint of violent patients, bending, and more, have been repeatedly shown to cause burnout and injury over time (Demerouti, Bakker, Nachreiner, & Schaufeli, 2000).

Gender and physical workload. Due to their role as token males in a predominantly female profession, male nurses may feel pressure to express masculinity through physical work (Heikes, 1991). Due to perceptions of masculinity and men as physically capable, men in nursing may be asked to take on more tasks such as lifting or restraining violent patients; men may also disproportionately volunteer for these physical tasks, increasing physical workload demands (Correll & Ridgeway, 2003). While previous studies have been unable to provide information on the differential relations of these physical demands with work outcomes for male and female nurses, preliminary results have begun to indicate differences in experienced physical workload. The 2016 State of Nursing survey reported that half of surveyed nurses lamented being "used as muscle" and asked to complete additional lifting and physical work not expected of their female counterparts. Male nurses also report being asked to interact with violent patients more frequently (Kandolin, 1993). Additional studies have found a higher prevalence of injury and musculoskeletal pain in female nurses than in male nurses (Menzel et al., 2004; Sikiru & Shmaila, 2009). These conflicting findings point to a lack of clarity not only in how workplace experiences may differ for men and women but also in the long-term effects of these differences. More investigation is needed to determine the ways in which men and women in nursing complete physical work such as lifting and restraining violent patients as well as to predict who is most likely to report physical injury.

Hypothesis 1: Male nurses experience more physical job demands than female nurses at work.

Psychological Demands. Nurses must interact with patients for prolonged periods of time throughout their work days; these patients may be not only physically aggressive but verbally abusive, disrespectful, accusatory, or doubtful of nurses' ability (Sauer & McCoy, 2017; Inoue et al., 2006). Nurses also face interpersonal demands from coworkers who may cope with their own stress negatively, displaying incivility or bullying behaviors.

Gender and psychological workload. Difficult interactions may not look the same for male and female nurses. Stereotypes of nurturing and competence may lead female nurses to spend a greater proportion of their work time directly interacting with patients and their families, while male nurses will experience less direct interaction time (Nadler & Stockdale, 2012; Floge & Merrill, 1986; Eckes, 2002). Female nurses may be expected to provide more soothing or nurturing interactions with patients due to stereotypes of women and femininity in the nursing profession, while men may be expected to demonstrate greater competence in medical tasks (Guy & Newman, 2004). Additionally, selective incivility may cause women to experience greater incivility from coworkers who do not value femininity and perceive women as having less power (Cortina, 2011).

Hypothesis 2. Female nurses will report performing more frequent interpersonal demands.

Organizational Demands. Although pressures of shift work, understaffing, and frequent attention switching are known to serve as job demands increasing cognitive workload and burnout, it is currently unclear how experiences of these organizational demands may differ for male and female nurses. Employment law limits the use of differing policy for men and women;

however, it is still plausible that policy and organizational changes have dissimilar effects in type or magnitude for male and female nurses due to differing expectations of men and women by supervisors, coworkers, and others.

Research question 1: Do organizational demands of shift work, understaffing, and attention switching differentially impact male and female nurses?

Differing Resources. In line with Demerouti and Bakker's job demands and resources model, the provision of certain resources may help to buffer the negative effects of job demands for nurses. As with job demands, job resources may be allocated to male and female nurses inequitably, affecting overall physical and psychological outcomes. Specifically, job resources of autonomy, social support, and supervisor support may play key roles in helping nurses to cope with the demanding aspects of their roles.

Autonomy. In nursing, job autonomy may allow nurses to choose when to do certain tasks, make decisions on how to allocate time and other resources, and influence the goals of their work. With implications for job satisfaction, commitment, job performance, and more, work autonomy is a vital resource provided to some workers which allows for increased control and decision-making power (Spector, 1986).

Gender and autonomy resources. Autonomy may not be distributed evenly, however; based on assumptions of competence and dominance of masculinity, men may be allocated greater work autonomy (Crowley, 2013). Male nurses have also been shown to select into areas of nursing with potential for greater autonomy, such as intensive care units or emergency departments (Heikes, 1991). This combination of unequal provision of autonomy and attraction to more autonomous roles by men may tip the scales in favor of additional autonomy for male nurses over their female colleagues.

Hypothesis 3: Male nurses will report experiencing greater work autonomy than female nurses.

Social Support. Support from coworkers in a medical setting has been shown to improve psychological and work outcomes, decreasing stress and turnover intentions while increasing job satisfaction (Morano, 1993). Supportive coworkers may help nurses to cope with stress, providing task-based support, informal training, and a more welcoming environment (Constable & Russell, 2010).

Gender and social support. In a primarily female career field like nursing, Kanter's theory of tokenism would predict challenges for the social integration and support of male nurses as the minority. Contrarily, past research has shown that both male and female nurses report no problems in social integration for male nurses, with male nurses even receiving beneficial treatment as token males (Ott, 1989). Female nurses have not historically shown resistance to male nurses in the same way that majority male groups discount or mistreat token female workers. Instead of assuming that members of the opposite gender are underqualified or do not have desirable contributions to make, female nurses may assume that male colleagues possess desirable characteristics (Kay-Snavely & Fairhurst, 1984). Past findings have demonstrated an overall societal preference for masculine behaviors, with more than half of respondents saying they "look up to" masculine men but only 32% saying they "look up to" feminine women (Parker, Horowitz, & Stepler, 2017). Men may be seen as having valuable, stereotypically masculine skills or qualities, leading them to experience greater status and more positive social treatment as compared to female colleagues.

Hypothesis 4: Male nurses will report experiencing greater social support from coworkers than female nurses.

Supervisor support. Just as social support can help nurses to cope with the challenges of their roles, the influence of their direct supervisor also plays an important role in predicting work and health outcomes (Kuvaas & Dysvik, 2010). Supervisors may be charge nurses, doctors, or hospital administrators, and their support may determine concrete outcomes as well as working environment. For example, supervisors may dictate schedules, performance evaluations, and promotions. Their support and empathy may help nurses to better cope with challenging patients or circumstances through further resource provision, understanding, and empathy.

Gender and supervisor support. Mimicking social support, supervisor support may fall inequitably on male nurses as a benefit of valued masculinity, possibly even more than social support (Yang et al., 2004; Williams, 1995). In addition to benefits of masculinity, male nurses may receive extra support as tokens due to supervisor attitudes or organizational policies. Supervisors may feel pressure from the organization to compensate for tokenism by providing additional support to workers in the gender minority, in this case men (Brough & Frame, 2004). Past research has also noted disproportionate promotion of male nurses into supervisory or management positions, indicating likely discrepancies in performance evaluations, hiring, and promotion, outcomes largely dependent upon supervisor support (McMurry, 2011; Chen et al., 2012).

Hypothesis 5: Male nurses will report experiencing greater supervisor support than female nurses.

Outcomes. With job demands and resources interacting in a complex way to affect work and health outcomes, it has been previously unclear how the combined effects of differential expectations and job experiences lead to outcomes such as burnout, organizational commitment, turnover intention, chronic pain, and more. The negative effects of job demands and buffering

effects of job resources have been long established, but this research helps to better address the question of how these combined experiences impact the lives of male and female nurses differently.

Research Question 2: Will the combined effects of job demands and job resources lead to differential burnout, stress, organizational commitment, and turnover intention for male and female nurses?

Research Question 3: Will the combined effects of job demands and job resources lead to differential injury frequency and chronic pain for male and female nurses?

METHOD

Participants and Procedure

In order to assess and compare the experiences of men and women in nursing empirically, this study had to ensure appropriate representation of approximately 50% male nurses in sampling despite lower proportions of only 10% men in the field. To address this issue, recruitment of participants was broad but targeted. An initial recruitment email was sent to a random sample of registered male and female nurses in Ohio, containing a brief description of the study, providing necessary IRB information and a link to the survey. Initial responses to the survey were primarily from female nurses, and further snowball sampling through social media, local hospitals, and online nursing community forums allowed for a greater male response rate. Additional recruitment emails were sent to members of the American Association of Men in Nursing, an organization with primarily male membership.

To qualify for this study, participants had to be registered nurses (RNs) or licensed practical nurses (LPNs) working at least 20 hours per week in direct patient care. Time to complete the survey was approximately 30 minutes, and participants who completed it were provided a $25 incentive. Due to nurses' limited free time and relatively high hourly wage, a greater incentive was needed than for a general population. Funding for participant incentives was provided by a grant from the Pilot Research Project Training Program through the National Institute for Occupational Safety and Health.

Using this method, 240 usable responses were collected. In total, 521 subjects attempted to complete the survey; however, only 120 male nurses and 120 female nurses qualified, completed the full survey, and passed all attention checks, allowing for comparisons of job demands, resources, and outcomes by gender. 84% of participants identified as white, a

proportion relatively similar to the proportion found in all registered nurses in the United States. The remainder of the sample was 5% African-American, 5% Asian, 3% Hispanic, 3% mixed race, and 1% other/not listed. Average age of all respondents was 35.06 with a standard deviation of 10.92 years; average age for male nurses in the study was slightly lower at 29.24 with a standard deviation of 7.29 years. Both LPNs and RNs qualified to take the survey; only 19% of respondents were LPNs.

Measures

Physical Demands. Physical work demands including lifting, bending, and prolonged standing were assessed. The survey asked about risky physical work tasks such as bending, twisting, and prolonged standing (Muldoon, Matthews, & Foley, 2012). Lifting frequency at varying levels of risk was also assessed, with participants rating how often they performed low-, medium-, and high-risk lifting behaviors (Menzel, Brooks, Bernard, & Nelson, 2004). Cronbach's alphas for the low-, medium-, and high-risk physical behavior scales were .66, .74, and .78, respectively. Nurses rated the frequency with which they completed certain physical behaviors in the past year on a four-point Likert-type scale from "never/very infrequently" to "often". Participants were also asked to rate the percentage of time they perform each of these risky physical behaviors on behalf of another nurse in order to garner how certain nurses may do a disproportionate amount of high-risk physical work (α=.83). Responses were summed for groups of behaviors by level of risk, with higher numbers indicating greater frequency of risky behaviors

Interpersonal Demands. Nurses were asked to report on interpersonal experiences in their roles, including perceived respect from patients, experienced incivility, and patient aggression. Patient interactions were assessed with a focus on aggression using an adapted

version of the Workplace Violence Tool (α=.86), with seven items asked about negative experiences with patients in the last month on a five point Likert-type scale from "never" to "many times" (Duncan et al., 2016). Negative interaction ratings were summed to assess total interpersonal demands from patients.

Perceived respect from patients was assessed using four items adapted from the National Nursing Assistant Survey (NNAS) questionnaire (Squillance et al., 2009). The Workplace Incivility Scale (α=.78) was used to assess experienced uncivil behaviors at work; participants indicated the frequency with which they experienced certain uncivil behaviors from coworkers on a scale from "never" to "many times" in the past month (Cortina et al., 2002). Total incivility was calculated by summing responses for each participant, with higher sums indicating more frequent experiences of incivility.

Organizational Demands. To assess shift work demands, nurses were asked to report typical shift length, average shifts worked per week, and weekly work hours, as well as number of night shifts and number of shifts worked less than 12 hours apart in the past year (Flo et al., 2012). Time pressure and understaffing were assessed with the Alberta Context Tool (α=.94), including questions such as "I often have time to do something extra for patients," "We have enough staff to get the necessary work done," and "We have enough staff to deliver the best possible care," (Estabrook et al., 2009). Staffing results were summed for each participant and then reversed so that higher numbers indicated more severe understaffing.

Before assessing how frequent attention switches impacted participants, attention switching was described with the statement, "Attention-switching or cognitive-shifting happens when you must quickly shift attention between multiple tasks." Demands related to the need for frequent attention switching were assessed using three items developed for this study, with one

item asking about frequency of task switching, one item about distress as a result of required attention switching, and a third item about errors as a result of attention switching. Participants rated frequency on a five-point Likert-type scale from "never/rarely" to "all the time."

Autonomy. The self-report survey asked about autonomy experiences in the forms of work methods, scheduling, and work criteria (Breaugh, 1985). Nurses indicated their agreement from 1 to 7 on ten items (α =.89) such as "I have control over the scheduling of my work," "I am able to modify what my job objectives are," and "I am free to choose the methods I use to carry out my work."

Support. Overall interpersonal connections with coworkers was assessed using six items from the Alberta Context Tool. Social support was measured using a 4-item scale (α=.92); participants rated their agreement from 1 to 7 on items such as "I can count on my colleagues to support me if difficulties arise," and "I feel that my coworkers find me important Papper's (1983) 9-item scale for supervisor support (α=.79) was used to assess communication and support from supervisors (Jones-Johnson & Johnson, 1992). Nurses rated agreement from 1-7 on items including "My supervisor gives me emotional support," and "My supervisor helps solve work-related problems."

Stress. As an outcome related to burnout, experienced work stress was investigated using the Perceived Stress Scale (Cohen, 1983). The scale includes ten items (α=.83) assessing frequency of stressful events or feelings within the last month, with participants rating on a five-point scale from "never" to "very often."

Burnout. Burnout experiences were explored using the Oldenburg Burnout Inventory (α=.80). The Oldenburg measure is especially appropriate for measurement of the job demands and resources model and its outcomes (Demerouti & Bakker, 2008). Nurses rated their

agreement from 1-7 on items including “There are days when I feel tired before I arrive at work,” and “After my work, I usually feel worn out and weary.”

Job Satisfaction. Job satisfaction was quickly assessed using one item from the Michigan Organizational Assessment Questionnaire (Cammann et al., 1983). The item asks participants to rate their overall satisfaction with their agreement with the item, “All in all, I am satisfied with my job.”

Organizational Commitment. Affective commitment, or positive emotional attachment to the organization, was the primary focus of commitment items due to its greater predictive power for attitudinal and behavioral outcomes (McGee & Ford, 1987). Three items (α=.91) were used to investigate affective commitment; participants rated agreement on measures such as “I feel emotionally attached to my organization,” and “I feel a strong sense of belonging in my organization” (Allen & Meyer, 1990).

Absenteeism. Absenteeism was assessed using one item, “Aside from paid vacation and holidays, how many days of work have you missed in the past month?” (Martin & Miller, 1986). Nurses were also asked to report number of days missed due to work-related injuries.

Turnover Intentions. Attitudes on turnover from the organization and perceived likelihood of leaving the field of nursing were explored. Turnover intentions were assessed rather than turnover behaviors to eliminate undue influence of external factors such as finances, spousal employment, or family situation. Additionally, desire to quit a job or nursing may be important predictors of job and turnover behaviors (Steel & Ovalle, 1984). Therefore, turnover intentions were explored using three items (α=.91), with nurses rating agreement on questions like “How likely is it that you will look for a job outside of your current organization during the next year?” and “How often do you think about quitting your job at your current organization?” (Arnold &

Feldman, 1982). Intention to leave nursing was asked in a similar manner, with three questions assessing desire to find a new job outside of the field of nursing (α=.91). Answers were summed for organization-specific turnover intention and intent to leave nursing, with higher total scores indicating greater intent to leave.

Injury Frequency. Self-reported injury occurrences in the past month were asked using items adapted from the National Nursing Assistant Survey questionnaire. The scale asks about frequency of injuries such as back injuries, bites, scratches, bruising, and more. Injury types were examined separately for gender differences and summed to assess total injury outcomes, with higher totals indicating more frequent injuries across types.

Musculoskeletal Pain. Using a measure from Kuorinka et al. (1987), musculoskeletal pain symptoms were investigated for different body regions. The scale asks about frequency of pain, discomfort, numbness or ache in the past month for body areas of neck, shoulders, upper back, joints, feet, and more. Sources of injury and consequences for work capabilities and assignments were assessed using scales from the NNAS questionnaire (α=.84). Six items ask about the cause of injuries, including patient aggression, slips/trips/falls, and equipment issues.

Demographics. Initial screening questions assessed whether participants met qualifications, including employment status, whether each participant was an RN, LPN, or other, how many hours they worked in a typical week, gender, and Demographic information including age, job level, organizational tenure, work setting, type of nursing, and more were asked at the end of the survey.

RESULTS

Descriptive statistics including means, standard deviations, and correlations can be found in Table 1.

Job Demands

Physical Workload. Hypothesis 1 stated that male nurses face greater physical workload demands than female nurses. Physical job demands were assessed by asking participants how often they engage in risky behaviors as well as how often they engage in risky behavior at the request or on behalf of another nurse. There were significant differences in high-risk physical behaviors by gender. Male nurses not only reported engaging in more high-risk physical behaviors (M=11.04, SD=3.78) than female nurses (M=8.18, SD=5.59), $t(238)=4.65$, $p<.001$, d=0.59, but they also reported completing more frequent high-risk physical behaviors by request (M=1.07, SD=.56) than female nurses (M=.76, SD=.77), $t(238)=3.58$, $p<.001$, d=0.46. Therefore, hypothesis 1 was supported.

Interpersonal Demands. Hypothesis 2 stated that female nurses would face greater interpersonal demands in the forms of coworker incivility and disrespect from patients, families, and others in their organization. Participants were asked to rate the frequency with which coworkers or supervisors displayed uncivil behaviors toward them. There was a significant difference in experienced incivility along gender lines; male nurses reported experiencing greater incivility (M=5.10, SD=2.66) than female nurses (M=3.92, SD=3.52), $t(238)=2.94$, $p<.01$, d=0.37. Further, female nurses reported greater perceived respect from patients (M=2.43, SD=.69) than male nurses (M=1.68, SD=.73), $t(238)=-8.13$, $p<.001$, d=1.06. Female nurses also reported perceiving significantly greater respect from families of patients (M=2.17, SD=.84) than male nurses (M=1.59, SD=.85), $t(238)=-5.34$, $p<.001$, d=0.69. Perceived respect from

supervisors also differed significantly by gender, with women reporting higher levels (M=2.11, SD=.87) than men (M=1.73, SD=1.03), t(238)=-3.04, p<.01, d=0.39. Perceived respect from the organization did not differ by gender, t(238)=.34, p>.05. Therefore, Hypothesis 2 was not supported.

Organizational Demands. Research question 1 asked whether organizational demands of shift work, understaffing, and attention switching differentially impacts male and female nurses. No significant differences in aggregate organizational demands were reported by male and female nurses (t=-1.24, p>.05). However, several differences in job demands and job characteristics appeared along gender lines in this sample.

On average, male and female nurses did not work a significantly different number of hours per week, t(238)=-1.76, p>.05. Female nurses tended to work significantly more hours per shift (M=11.14, SD=3.04) than their male counterparts (M=7.97, SD=2.95), t(238)=-7.88, p<.001, d=1.06 while male nurses tended to work significantly more shifts per week (M=4.58, SD=1.16) than female nurses (M=3.64, SD=1.10), t(238)=6.39, p<.001, d=0.83. Additionally, male nurses reported working significantly more night shifts per month (M=9.45, SD=4.06) than female nurses (M=4.12, SD=6.05), t(238)=8.01, p<.001, d=1.03. Female nurses reported significantly less adequate staffing (M=4.32, SD=3.73) than male nurses (M=5.83, SD=3.13), t(238)=3.39, p<.01, d=0.44.

Female nurses reported that more attention switching was required for their jobs (M=3.02, SD=1.08) than male nurses (M=2.31, SD=.98), t(238)=-5.34, p<.001, d=0.69. Contrarily, male nurses reported greater distress as a result of required attention switching in their jobs (M=1.90, SD=1.01) than female nurses (M=1.42, SD=.97), t(238)=3.79, p<.001, d=0.48. Male nurses also reported making more errors in their jobs due to frequent attention

switching (*M*=1.55, *SD*=1.04) than female nurses (*M*=.95, *SD*=.84), *t*(238)=-4.91, *p*<.001, *d*=0.63.

Job Resources

Hypothesis 3 stated that male nurses would report experiencing greater autonomy in their work compared to their female colleagues. There was no significant difference in reported job-related autonomy by gender, *t*(238)=-.03, *p*>.05, failing to support hypothesis 3.

Hypothesis 4 predicted that male nurses would report greater social support from coworkers than female nurses. There was a significant difference in perceived social support from coworkers; female nurses reported significantly greater social support (*M*=4.51, *SD*=1.09) than male nurses (*M*=4.00, *SD*=1.08), *t*(238)=-3.58, *p*<.001, *d*=0.47. Therefore, hypothesis 4 was not supported.

Hypothesis 5 stated that male nurses would perceive greater social support when compared with female nurses. There was a significant difference in perceived supervisor support by gender. Male nurses reported significantly greater support from supervisors (*M*=2.30, *SD*=.70) than female nurses (*M*=2.11, *SD*=.73), *t*(238)=2.09, *p*<.05, *d*=0.27, supporting hypothesis 5.

Psychological Outcomes

There was no significant difference in turnover intent for participants' current jobs, *t*(238)=-.04, *p*>.05. Despite this lack of differences in job-specific turnover, intent to leave the field of nursing differed significantly by gender, with male nurses reporting greater intent to leave (*M*=4.33, *SD*=2.77) compared to female nurses (*M*=2.33, *SD*=3.23), *t*(238)=5.14, *p*<.001, *d*=0.66.

There was no significant difference in reported job satisfaction by gender, $t(238)=-1.71$, $p>.05$. Male nurses reported greater affective organizational commitment ($M=8.00$, $SD=2.68$) compared with female nurses ($M=6.75$, $SD=3.87$), $t(238)=2.91$, $p<.01$, $d=0.38$.

Male nurses reported greater overall stress ($M=15.63$, $SD=4.88$) than female nurses ($M=14.07$, $SD=6.08$), $t(238)=2.19$, $p<.05$, $d=0.29$. There were no significant differences in burnout or its components of exhaustion [$t(238)=-.01$, $p>.05$] or energy [$t(238)=.09$, $p>.05$].

Research question 2 asked how the combined effects of differing job demands and resources impact the psychological outcomes of burnout, stress, organizational commitment, and turnover intention. The three-way interaction between gender, demands, and resources was nonsignificant for burnout ($\beta=.00$, $p=.99$), stress ($\beta=.33$, $p=.109$), organizational commitment ($\beta=-.06$, $p=.80$), and turnover intention ($\beta=-.05$, $p=.83$). Given the significant gender difference in intent to leave nursing, the three-way interaction of gender, demands, and resources was run for this outcome as well; there was no significant interaction ($\beta=-.15$, $p=.513$).

Physical Outcomes

Although not hypothesized, physical outcomes were compared for male and female nurses due to the striking findings of gender differences in physical workload. Male nurses reported experiencing significantly greater frequency of injuries ($M=5.44$, $SD=5.21$) than female nurses ($M=2.73$, $SD=3.19$), $t(238)=4.87$, $p<.001$, $d=0.63$. The same pattern holds true for specific types of injury, with men experiencing greater frequency of back injuries, scratches, cuts, open wounds, bruises and black eyes, and even human bites when compared with their female colleagues (Table 2).

Female nurses reported significantly more pain ($M=13.99$, $SD=7.49$) than male nurses ($M=11.41$, $SD=6.76$), $t(238)=-2.81$, $p<.01$, d=0.36. Therefore, whereas men reported greater

frequency of physical injury, women reported significantly more instances of pain. There was a significant difference in days missed due to injury, with male nurses reporting a significantly higher number of days (M=1.52, SD=2.14) compared to female nurses (M=.28, SD=1.61), $t(238)=5.06$, $p<.001$, d=0.65. Men also reported missing a greater number of days of work outside typical days off (M=1.73, SD=3.56) than women (M=.39, SD=.85), $t(238)=4.01$, $p<.001$, d=0.52.

Research question 3 asked how the combined effects of differing job demands and resources would impact the physical health of male and female nurses. There was a significant three-way interaction of gender, total job demands, and total job resources on physical injury (β=-.78, $p<.01$), indicating that the combined effects of demands and resources on injury differed between male and female nurses. The three-way interaction of gender, demands, and resources explained a significant portion of the variance, [R^2=.22, $F(1, 238)=10.28$, $p<.01$]. For nurses facing high job demands, resources provision had opposite effects for men and women: men provided greater resources reported greater injury frequency, while women with more resources reported fewer injuries (Figure 1). For nurses facing lower job demands, resources decreased injury for both male and female nurses but had a greater effect for men (Figure 2). When participant age was held constant, there was still a significant three-way interaction of gender, demands, and resources on physical injury (β=-.74, $p<.01$), with the three-way interaction explaining a portion of the variance beyond age, demands, resources, gender, or the two-way interaction of demands and resources [ΔR^2=.04, R^2=.22, $F(1,238)=10.41$, $p<.01$]. There was no significant interaction of gender, demands, and resources on musculoskeletal pain reported (β=.04, p=.86).

DISCUSSION

While preliminary, this study provides the first clear, empirical evidence that the challenges of nursing impact male and female nurses differently. Using the job demands and resources model of burnout, this study demonstrates the ways in which gendered work experiences lead to differing levels of burnout, injury, and job attitudes. Despite the valuation of masculinity in society overall, male nurses report more damaging demands, including physical workload, incivility, and patient disrespect. Gender differences in social and supervisor support point to how gender dynamics shape the interpersonal environment in medical workplaces. Further differences in outcomes like stress, injury, and intent to leave the field of nursing point to the impact of differing job demands and resources in the short term. Results have long-term implications for safety, performance, and retention of nurses and token men in this predominantly female field.

Job Demands

The very structure of work in nursing tends to vary along gender lines, with men reporting more frequent but shorter shifts and more night shifts than female colleagues. Perceived demands of work requirements differed for men and women in multiple ways; for example, despite women reporting greater requirements of frequent attention switching, men report more distress and more frequent errors as a result of frequent attention switching. Female nurses also reported less adequate staffing in their units, possibly contributing to the demands of attention switching. Continued research in this area should explore the mechanisms causing men greater distress and more frequent errors in response to this demand as well as examining the tools that nurses use to balance multiple patients at once. Although nurses consistently report maintaining a running mental list of tasks to be done, there may be individual differences in

coping with a high volume of tasks (Unsworth & Engle, 2008). Interventions in this area should seek to help prevent distress and errors while balancing multiple challenging tasks, potentially with gender-specific interventions.

Differences in job demands extend beyond organizational and time factors, affecting the physical work male and female nurses must do. Not only do male nurses report more frequent high-risk physical behaviors, they also indicate that they are performing these behaviors on behalf of colleagues more frequently than female nurses. Multiple factors may push men to perform more high-risk physical work; they may be "used as muscle" due to stereotypes of men, might feel pressure to perform in stereotypically masculine ways in a stereotypically feminine field, or may simply be the largest or strongest-appearing nurse working during a shift. Further research in this area should investigate the attitudinal and structural mechanisms pushing men to engage in high-risk lifting and other physical work as well as the backlash facing male nurses who do not conform to expectations of masculinity (Rudman et al., 2012). Interventions should target the decision-making process and acceptance of help in the form of assistive equipment and team-based lifting. Interventions of this nature may require tailoring toward male nurses in order to limit the injuries disproportionately experienced by men; for example, reshaping the idea of masculinity at work using mentoring or spokesmen may help men to shift norms toward team lifting and use of assistive equipment.

Although the finding that men face disproportionate physical demands matched hypotheses and previous qualitative findings (e.g., *State of Nursing*, 2016), other results herein contradicted previously held ideas about social privilege held by men at work (e.g., Correll & Ridgeway, 2003; Hodges & Budig, 2010). Other demands disproportionately facing male nurses include perceived disrespect from patients and families and incivility from coworkers. Gender

theory points out the ways that men may experience privilege; alternatively, Kanter's 1977 theory of tokenism may better explain the social challenges facing men in nursing. As a token group, men may feel excluded by ingroup female nurses. Similarly, perceptions of nursing as a feminine career may lead to stereotypes of male nurses, skepticism from patients and families, and even social isolation inside and outside of work (Fottler, 1976). Many questions arise from these findings on interpersonal demands. Future research should explore the social effects of working in counter-stereotypical career fields as well as patient and customer treatment toward token groups. Interventions to consider should target nurse bullying, social exclusion, and perceptions of nursing as a gendered profession.

Job Resources

Differing experiences for male and female nurses extend beyond the demands of work and include resources provided by coworkers and supervisors. While no differences were found in autonomy at work, women reported receiving greater social support from colleagues, likely allowing them to better cope with the challenges of taxing work with the help of their coworkers (Zellars & Perrewe, 2001). This lack of social resources is undoubtedly related to the interpersonal demands which disproportionately affect men. As tokens, male nurses may perceive resentment or social exclusion from colleagues, while female nurses may feel more inclined to provide support for same-gender coworkers who they perceive as their ingroup (Van Laar et al., 2014).

Male nurses reported receiving more supervisor support, matching initial hypotheses. This finding aligns with previous research which indicates that male tokens tend to see advantages in hiring, promotions, and other supervisor-driven outcomes (McMurry, 2011; Chen et al., 2012). Despite their status as tokens in the field of nursing, men may receive preferential

treatment due to cultural attitudes of masculinity as valuable, because of organizational efforts to retain token men, or because male nurses are perceived as lacking coworker social support (Connell & Messerschmidt, 2005; Stott, 2004; Ryan et al., 2012). Future research in this area should examine the dynamics of same- and different-sex dyads to better understand organizational and attitudinal factors pushing supervisors to build better relationships with male nurses under their supervision.

Physical and Psychological Outcomes

The mixed results in psychological outcomes point to the complex roles that job demands and resources jointly play in determining job attitudes, stress, and burnout. Despite the apparent challenges male nurses face at work, men report greater affective organizational commitment—a stronger emotional attachment to their organization—than female nurses. Contrarily, men in this sample also reported higher stress levels than women. This result may reflect some difference in attribution when male and female nurses are stressed—for example, men may see their stress as related to their coworkers or factors outside the organization's control, leading them to remain attached to the organization despite their stress (Yang et al., 2016). Additionally, supervisor support may lead male nurses to perceive their organization as supportive; with lesser supervisor support, female nurses may not feel this same attachment (van Vuuren, de Jong, & Seydel, 2007). Male nurses may also lack same-gender friends in nursing with whom they can compare workplaces, leaving them no benchmark by which to measure if their organization treats them well. Finally, men may perceive greater opportunity for upward mobility in their organizations; past findings have indicated that men tend to be disproportionately promoted in nursing, and these opportunities for financial growth and greater autonomy may lead men to perceive the organization as more invested in them (Connell & Messerschmidt, 2005). Future studies should

explore these possibilities to better understand the combined roles of supervisor treatment, stress attribution, job comparison, and promotion opportunity in determining affective commitment in the face of disproportionate stress.

As the field of nursing continues to face recruitment and retention problems, the issue of turnover remains increasingly important. Although this cross-sectional study did not assess turnover behaviors, turnover intention provides a vital indicator of nurse attitudes and potential for future turnover (Vandenberg & Nelson, 1999). No differences were found for job-related turnover intention, but male nurses show a higher intention to leave the field of nursing overall. Given men's greater organizational commitment, their desire to leave nursing may be surprising. Multiple factors may be influencing men to feel attachment to their organizations while feeling pulled to leave nursing altogether. For example, men in nursing may feel attachment to their organizations because they view their supportive supervisors as proxies for a supportive organization. If men are victims of social exclusion and stereotyping, however, they may wish to leave the field causing them related stress regardless of support from their organization (Inzlicht & Kang, 2010). Additionally, if male nurses attribute their stress to themselves and/or the nature of their roles and not the fault of the organization, they may feel that there is no better option within the field of nursing (Weinstein & Ryan, 2011). This feeling may be exacerbated by men not knowing many other male nurses working in other organizations with whom they could compare job challenges and stressors. If men continue to experience unique physical and interpersonal challenges in nursing, recruitment and retention of male nurses may present a problem, exacerbating the nursing shortage and gender disproportions. In order to address this disproportionate intent to leave nursing, organizations should work to target those challenges

facing all nurses but especially men, including dangerous physical work, challenging interactions with patients, and social exclusion by coworkers.

The lack of effect of the three-way interaction between demands, resources, and gender on psychological outcomes points to the complex roles of demands and resources in jointly predicting nurse outcomes. In each of these cases, the interaction of demands and resources on psychological outcomes was also nonsignificant, indicating that while demands and resources separately predict burnout, stress, commitment, and turnover intention, the combined effect of the two provides no additional predictive power. In a profession as demanding as nursing, it may be that the resources assessed in this study do not adequately help nurses to cope with the demands assessed. Given the high burnout rate in nursing, it is quite possible that while resources alone may negatively predict burnout, they do not buffer the disproportionately large effects of demands as predicted.

Finally, the findings of this research paint a concerning picture in regard to physical outcomes for both men and women. Male nurses' higher incidence of injuries, including back injuries, scratches, cuts, open wounds, bruises, black eyes, and even human bites are immensely concerning not only as short-term problems but as predictors of long-term, debilitating injury. As a result of injuries, male nurses are missing a greater number of work days attempting to heal and regain working ability. Their higher reports of overall absenteeism point to challenges in work recovery and negative impacts of both physical and psychological challenges. Unexpected absenteeism and injury not only make staffing more challenging but also can be an indication that long-term physical consequences will continue to plague male nurses. The higher incidence of pain reported by female nurses is certainly cause for concern as well. While men report more physical workload and injuries, pain reports from female nurses may point to gendered

expectations about pain expression. Although injuries are relatively objective, pain may be seen as subjective and men may be unwilling to report instances of pain. Additionally, men in nursing tend to be younger and have fewer children, potentially meaning lesser pain-inducing physical demands are placed on them outside the workplace.

A significant three-way interaction was found for gender, demands, and resources on physical injury, indicating that the combined effects of demands and resources differ for men and women in determining injury rates. The interactions of gender by demands and gender by resources were both nonsignificant for injury outcomes however, pointing to the specific relationship between demands and resources as gender specific. Figures 1 and 2 show the interaction of job resources and gender on injury outcomes for nurses facing high and low demands (Aiken & West, 1991).

Faced with high demands, male and female nurses appear to be impacted differently by resource provision; men report greater injury frequency when more resources were provided to them in high-demands settings, while women reported the opposite: high resources associated with lower injury frequency. The same does not hold true for those facing lower demands; greater resources are related to lower injury rates for both men and women, although the association appears larger for men. Given the greater physical workload reported by men, it may be that male nurses who receive social support and other resources are also those who bear disproportionate physical burden—colleagues may feel that since the male nurse is a friend, it is more acceptable to ask them to do lifting or other physical work that is not assigned to them (Van der Rijt et al., 2013). Alternatively, male nurses may receive resources in the form of social support and supervisor support following injuries (Gillen et al., 2002). Further research is needed

to fully understand the chronological relations between job demands, resources, and physical injury for male nurses.

Despite the significant interaction for injury frequency, instances of pain were not predicted by the same three-way interaction. This seemingly contradictory finding may indicate that pain is affected by experiences outside of work or not impacted by job resources. This supposition is supported by the finding that job resources are not significantly related to pain in this sample; if pain is a result of nonwork activities, autonomy and support at work likely will not help nurses to address the sources or outcomes of pain.

The finding of a significant three-way interaction for injury frequency points to the possibility that physical workload may be the most impactful, gender-divided, demanding component of the job demands and resources model as seen in nursing. With the recognition that resources may differentially impact men and women and likelihood of injury in nursing, interventions should be developed to ensure that resources provided—those previously assumed to help everyone—truly help all nurses cope with their challenging work. At the same time, addressing the disproportionate physical workload demands of male nurses may help to decrease these concerning injury effects seen here. Further research in this area should explore how best to divide work, encourage nurses to use assistive equipment and accept help, and shift norms which may lead men to believe they must bear more physical burden at work.

Implications

The implications of this study are many; with clear evidence that men and women are experiencing differing challenges in the field of nursing, more questions arise in addressing these issues. Moving forward, research in this area should explore in-depth associations and contextual

factors causing these discrepancies as well as general and gender-specific interventions to mitigate the negative physical and psychological outcomes evident here.

In addition to implications for gender-tailored interventions, the findings herein carry implications for understanding of gendered treatment, tokenism, and social dynamics at work. For example, the challenges disproportionately facing men in this study indicate that although men may receive gender-related privilege outside of work, their status as tokens in a feminine career field mostly disadvantages them.

Recognition of the challenges differentially faced by men and women in nursing may also help to address the ongoing issues of nurse recruitment and retention. If nursing continues to be perceived as a strictly feminine career which disadvantages men, recruitment and retention of male nurses will remain and ongoing problem. Job demands, injury, stress, burnout, and turnover intentions reported by all nurses in the sample point to a need for significant changes to the field of nursing overall. The problems herein are likely cyclical and cannot be adequately addressed without sufficient staffing. Organizations, nursing schools, and supervisors must all make efforts to address the challenges facing male and female nurses in order to make nursing careers more accessible to all.

The most significant implications of this study are for interventions. As organizations work to make necessary changes to better serve nurses, these interventions may need tailoring to male and female nurses specifically. The results of this study, particularly the findings of greater interpersonal and physical demands for male nurses, point to areas for potential workplace interventions. For example, if men face higher physical work demands due to more frequent requests from coworkers, interventions may need to address those stereotypes which lead men to feel greater responsibility for physical work and lead women to perceive men as most capable of

high-risk lifting using male mentors, spokesmen, or other gender-specific messaging. Additional interventions can target the organization, social environment, and biases of supervisors. At the organizational level, interventions might include changing the way nursing careers are marketed—for example, ensuring adequate representation of men in nurse recruitment materials.

Furthermore, organizations must address the crisis of understaffing which undoubtedly affects all nurses but seems to cause greater attention-related errors and distress for men. Social interventions may also be necessary to help men integrate into work units which have been historically female. Nurse bullying is a well-documented, ongoing issue which needs further intervention. Developing zero-tolerance policies for worker bullying, partner programs to help introduce new nurses to the unit, and resource groups for nurses coping with social stress may be important steps in helping men to better integrate socially into departments, thereby receiving greater support in the face of stress.

Finally, interventions should specifically target supervisors and their potential biases about the field of nursing and concepts of men and masculinity. Bias training, continuing education, and hospital communications provide opportunities to address attitudes which may lead supervisors to favor men socially or put them in disproportionately demanding situations. With the knowledge that male and female nurses face different job demands and resources at work, potential interventions will require further investigation to ensure they adequately address both male and female nurses, not only the majority women in the predominantly female field. With these findings as a starting point, treatment of nurses and their safety, performance, wellness, and satisfaction can be optimized.

Limitations

As a pilot study, this research has several limitations. In this case, self-report was the best way to assess attitudes and perceived workload from nurses as many of the reported demands, resources, and outcomes are subjective. Subjective perceptions are what drive most individual outcomes, but self-report means that the differences seen in work experiences may not be consistently or objectively different; one group of nurses may be more reactive or sensitive to work experiences, or there may be differences in patterns of survey responding (Spector, 1994). Additional consideration is also needed to determine whether needs of male and female nurses may differ—for example, male nurses report lower perceptions of social support but may also have lesser need for this type of support. Further explorations of this topic could assess more objective or other-report factors in order to assess reactivity and better understand how needs may differ between groups.

In addition, the cross-sectional nature of this study limits inferences of causality. Continued research in this area should examine the joint effects of job demands and resources on outcomes longitudinally for male and female nurses to see how time plays a role in differences first observed in the present study. Because gender cannot be manipulated for research, many of the social factors influencing gendered work are challenging to understand in full. Further research in this area may require an interdisciplinary approach, utilizing developmental and industrial-organizational psychology, gender, and healthcare perspectives to best understand what leads to the differing experiences of male and female nurses.

Despite its limitations, this study serves as a vital first step in understanding the differing experiences of men and women in nursing. If organizations are to best serve nurses, patients, and families, they must first understand the factors making work more challenging for nurses. Using

the findings on gendered work from this study, researchers can begin asking better questions about how to help all nurses, not just female nurses in the majority. Nurses fill a vital role in medical settings and in society as a whole; with better understanding of their unique challenges and how to address them, we can begin to serve them as they serve us.

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APPENDIX A. TABLES

Table 1, Part 1.

Summary of Intercorrelations Divided by Gender

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Organizational Demands	–	-.30**	.62**	.06	.37**	.31**	.23*	.17	.54**	-.46**	-.05
2. Time Pressure	.43**	–	-.07	.00	-.10	-.08	-.04	.20*	-.32**	.06	.12
3. Understaffing	.54**	.34**	–	-.12	.09	.25**	.06	.00	.55**	-.37**	-.03
4. High Risk Behavior	.13	.17	.15	–	.21*	.32**	.46**	.41**	-.17	-.21**	-.07
5. Low/Med. Risk Behav.	.29**	.12	.24**	.57**	–	-.20*	.29**	.30**	.34**	.16*	.19*
6. Patient Disrespect	.54**	.41**	.48**	.03	.09	–	.18*	.14	-.09	.46**	-.23*
7. Patient Violence	.41**	.18*	.31**	.23*	.22*	.35**	–	.55**	.08	-.25**	.00
8. Experienced Incivility	.39**	.22*	.42**	.08	.11	.42**	.34**	–	.00	.26**	.03
9. Required Attn Switching	.32**	.09	.20*	.15	.24**	.07	.29**	.23*	–	-.00	.02
10. Social Support	-.25**	-.33	-.22*	-.09	-.11	-.23*	-.08	-.16	-.01	–	.15
11. Supervisor Support	-.15	.02	-.01	-.06	-.11	.02	-.05	-.18*	-.03	.07	–

Note. Intercorrelations for male nurses are presented above the diagonal in parts 1 and 4 of the correlation table in blue, while intercorrelations for female nurses are presented below the diagonal in parts 1 and 4 in black.
** $p < .01$
* $p < .05$

Table 1, Part 2

Variables	1	2	3	4	5	6	7	8	9	10	11
12. Autonomy	-.16	.27**	-.31**	.07	-.15	.02	-.15	-.10	-.13	.40**	-.11
13. Burnout	.45**	.05	.18*	.01	.11	.09	.23*	.32**	.19	-.46**	.02
14. Perceived Stress	.48**	-.13	.31**	.24**	-.12	.65**	.23*	.26**	.13	-.50**	-.22*
15. Injury Frequency	.09	.02	-.03	.33**	-.10	.21*	.35**	.45**	-.11	-.23*	-.16
16. Pain Frequency	.09	.02	-.03	.33**	-.14	.34**	.49**	.40**	-.02	-.29**	-.13
17. Turnover Intention	.46**	-.11	.46**	-.15	.03	.44**	.29**	.11	.26**	-.31**	-.05
18. Intent to Leave Nursing	.48**	-.11	.23*	.14	-.09	.54**	-.23*	.18*	.05	-.47**	-.17
19. Affective Commitment	.-.05	-.25**	-.23*	-.05	-.07	-.09	-.21*	-.05	-.08	.19*	-.11

Note. Table 1, part 2 contains intercorrelations for male nurses only.
** $p < .01$
* $p < .05$

Table 1, Part 3

Variables	1	2	3	4	5	6	7	8	9	10	11
12. Autonomy	-.40**	-.30**	-.29**	-.08	-.19*	-.44**	-.18*	-.37**	-.01	.28**	.03
13. Burnout	.58**	.52**	.47**	.14	.29**	.55**	.31**	.45**	.20*	-.29**	-.12
14. Perceived Stress	.49**	.46**	.38**	.17	.15	.43**	.23*	.39**	.16	-.27**	-.20*
15. Injury Frequency	.32**	.31**	.22*	.13	.22*	.31**	.28**	.31**	.18	-.13	-.14
16. Pain Frequency	.45**	.23*	.35**	.11	.21*	.39**	.22*	.35**	.23*	-.13	-.10
17. Turnover Intention	.47**	.33**	.54**	-.01	.19*	.53**	.26**	.38**	.05	-.26**	-.07
18. Intent to Leave Nursing	.30**	.25**	.30**	-.01	.08	.29**	.14	.23*	.09	-.15	.05
19. Affective Commitment	-.41**	-.40**	-.38**	-.11	-.09	-.54**	-.26**	-.26**	-.11	.28**	.01

Note. Table 1, part 3 contains intercorrelations for female nurses only.
** $p < .01$
* $p < .05$

Table 1, Part 4

Variables	12	13	14	15	16	17	18	19
12. Autonomy	–	-.25*	.09	.07	-.02	-.22*	-.20*	.53*
13. Burnout	-.38**	–	.48**	.19*	.29**	.43**	.50**	-.43**
14. Perceived Stress	-.28**	.70**	–	.31**	.39**	.46**	.53**	-.03
15. Injury Frequency	-.20*	.27**	.21*	–	.49**	.13	.25**	-.04
16. Pain Frequency	-.21*	.33**	.26**	.33*	–	.34**	.36**	-.25**
17. Turnover Intention	-.32**	.64**	.42**	.18*	.26**	–	.65**	-.48**
18. Intent to Leave Nursing	-.14	.46**	.23*	.25**	.14	.44**	–	-.29**
19. Affective Commitment	.39**	-.50**	-.40**	-.16	-.28**	-.54**	-.36**	–

Note. Intercorrelations for male nurses are presented above the diagonal in parts 1 and 4 of the correlation table in blue, while intercorrelations for female nurses are presented below the diagonal in parts 1 and 4 in black.
** $p < .01$
* $p < .05$

Table 2.
Injury Types by Gender

Injury Type	Gender	Mean	Standard Deviation	*t*	Significance (2-tailed)
Back Injury	Male	1.13	1.09	2.20	$p<.05$
	Female	.82	1.08		
Strains/Pulled Muscles	Male	1.09	1.15	1.76	$p>.05$
	Female	.83	1.13		
Human Bites	Male	.90	1.06	7.97	$p<.001$
	Female	.08	.36		
Scratches, Cuts, & Open Wounds	Male	.93	1.18	2.67	$p<.01$
	Female	.56	.94		
Bruises & Black Eyes	Male	.95	1.17	5.16	$p<.001$
	Female	.30	.74		
Other	Male	.45	1.04	3.04	$p<.01$
	Female	.13	.54		

Note. All injury types were asked on a Likert-type scale from never (0) to four or more times per month (4).

APPENDIX B. FIGURES

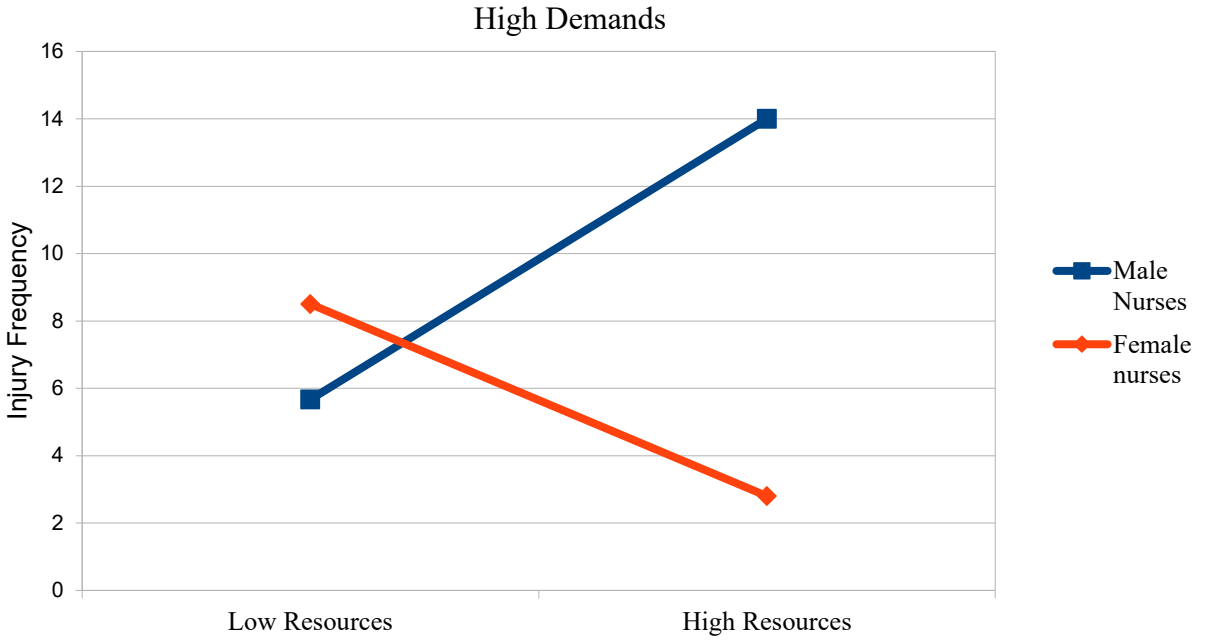

Figure 1. For nurses facing greater job demands, greater resources had opposite effects for men and women, with male nurses reporting greater injury frequency with more job resources while women reported fewer injuries with fewer resources.

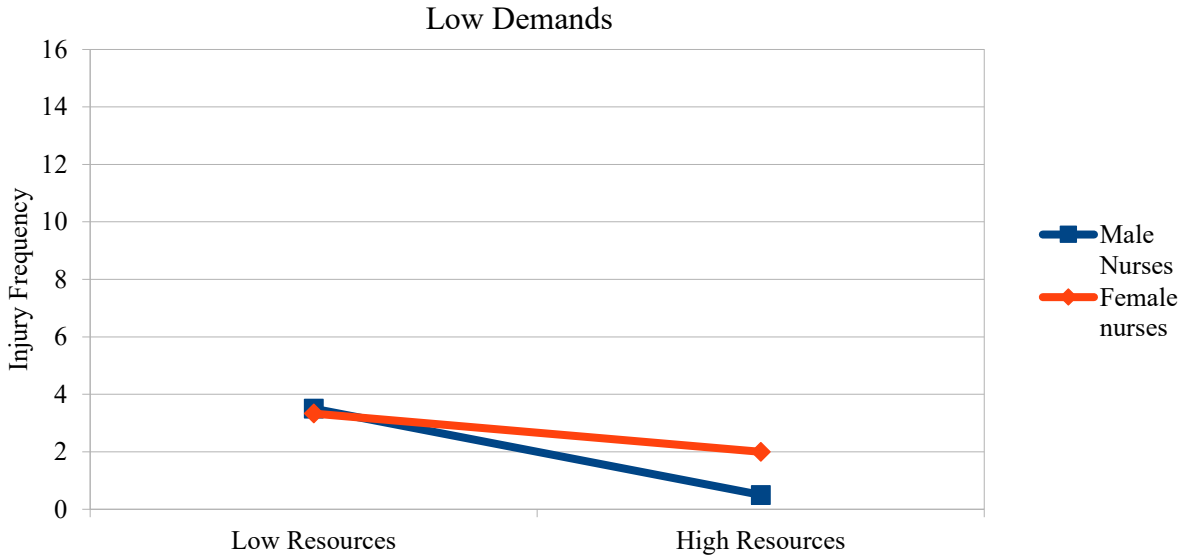

Figure 2. For nurses facing lower job demands, higher job resources had a greater effect for male nurses, who reported less frequent injuries when provided more job resources in their lower-demand work.