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Nursing Together: A Grounded Theoy of Acquiring Self Identity that Motivates or Obstructs Hospital Nurses to Work After Injury

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Nursing Together: A Grounded Theory of Acquiring Self Identity that Motivates or Obstructs Hospital Nurses to Work After Injury

by

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DISSERTATION

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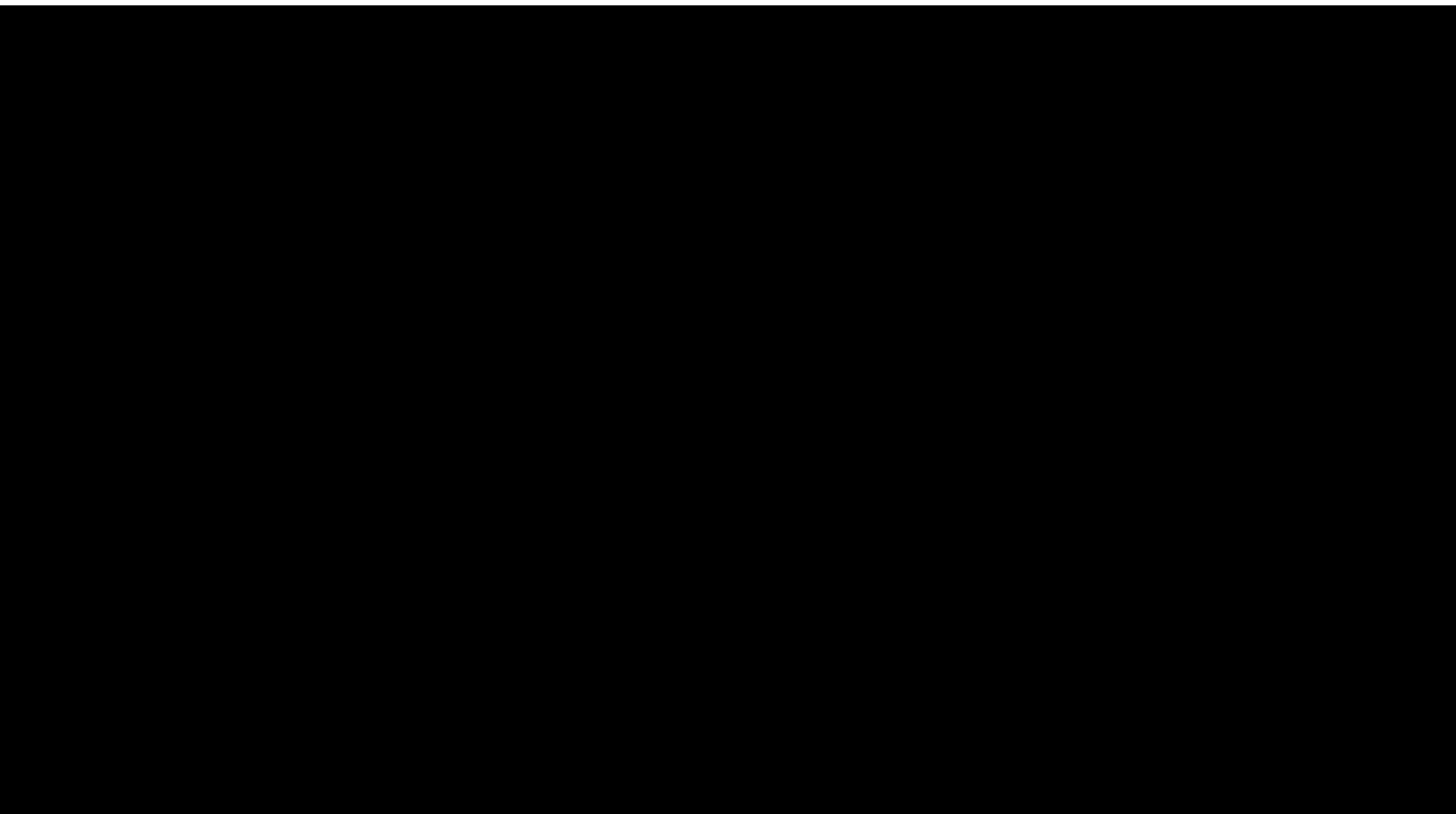

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ABSTRACT

Purpose: The aim of this study was to examine motivations and obstacles experienced by hospital nurses who endeavor to work after injury by focusing on the injury experience, work climate, risk of re-injury, workers' compensation, and issues related to personal lifestyle. **Background/Significance:** Nurses represent the largest group of hospital workers and experience some of the highest numbers of work-related injuries. Injuries not only cause physical and emotional harm but reduce the number of available hospital nurses and can create socioeconomic hardships for workers and their families. **Methods:** Motivations and Obstacles to Work for the Injured Hospital Nurse (MORE Nurses study), used ground theory methodology analysis including coding and conceptualization were used in the analysis of the data. Nurses (n = 16) from two different settings were interviewed. **Findings:** Participants reported fear of injury based on their own experiences and witnessing career ending injuries to co-workers. Many reported altruistic motivations relating to their work as a *calling*. They were reluctant to report an injury for reasons including their identity, stigma for disability, desensitization of self needs, and loyalty to patient care. Therefore, many nurses reported working with injuries, self-modifying their work duties when possible. Similarities and differences in perceptions of nurses revealed the importance co-worker relationships play in the injured nurses' ability to maintain work. Three conceptual sub-categories emerged from the data. From them, the conceptual description of *Nursing Together* represented the connections nurses share which motivate them to work. **Conclusions:** Nurses are compelled to do their work based on deep beliefs related to the importance of caring for another human being in

need. The degree to which nurses personally connect with nursing as something more than a job, influences their perseverance to maintain work, the quality of the patient care they delivery, where they chose to work, and how they connect with co-workers. These connections are essential in determining whether nurses will find ways to *nurse together* as an identity; *nurse together* as a consequence of injury; or *nurse together* in the physically and emotionally demanding hospital setting.

DEDICATION

Claudina (Tina) Mullen
1931-2007

To my mother who died suddenly and peacefully shortly before the completion of this accomplishment. Like the mothers of many of the participants in this study, my mother wanted to be a nurse; however, because of life's circumstances, she did not have the chance.

With love, admiration, and my deep gratitude for the sacrifices she made for me.

To my husband, Gary Cecchini, who gave me the love, support, and the space needed to complete what often seemed like a selfish act of doctoral study, because I had the time of my life doing it.

And lastly to my wonderful, creative, and hard-working children, Michael and Francesca, who have both been in college while I have been working on this degree and whose own scholarly achievements are impossible for me to keep up with.

ACKNOWLEDGMENTS

There are many to whom I owe a debt as I complete this level of study and accomplishment. The most important has been my mentor, teacher, and advisor, Marion Gillen, PhD, MPH, RN, who either recognized something in me very early on, when I was exploring the option of getting my PhD, or is just incredibly kind and generous to everyone equally, which I believe is really the case. Without Dr. Gillen I cannot imagine getting through the obstacles I have faced, making the necessary adjustments to complete my degree and maintain work at the same time. When I met Susan Kools PhD, RN, I knew she would be the mentor to help me with grounded theory. She was like a Zen master, always encouraging and supportive, but never too directive, which allowed me to *really* learn to do the analysis that is so important in qualitative research. Paul Blanc, MD, took me on as a research assistant with the GROW study and taught me the importance of collaborative and multidisciplinary research, and Kit Chesla, DNSc, RN, has been my philosophic guide who helped me do deeper and maintain the level of scholarship that enhances my work.

As important as my faculty advisors have been, many other have not been individually named; my scholarly student peers at UCSF also have been key to my success. In particular, Soo-Jeong Lee has been my friend and colleague from our first days in the Occupational and Environmental Health Nursing program. Also important has been my qualitative analysis group members, Lucy and Audrey. Finally, Louise Swig, MPH, from the GROW study, was always available to teach me the details of conducting rigorous research.

Besides my family who has been very supportive of the time and attention my academic commitments took, I am happy that my friends have waited patiently for me to return to the social world, which includes going to an occasional movie, talking face-to-face rather than only by e-mail, and celebrating birthdays. I'll do my best to make it up to you now that I'm done!

Most of all, I owe a huge debt to the nurses who took the time to talk to me about their experiences. They did so even though they were sometimes tired of being interviewed, having already participated in the GROW study. Nonetheless, it was often apparent that they were genuinely interested in talking about the passion they have for their work. When they described what seemed to be hardships in carrying out the needs of their patients, they did so to convey that the importance of their work was far more important than their own individual needs. Nursing almost seemed to be in their genes. I came away from each interview in *awe* of their personal and professional efforts and proud to be a nurse myself.

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CHAPTER ONE: THE STUDY PROBLEM

Introduction

Work serves many purposes in our lives. It provides economic rewards that are essential for a quality of life for ourselves as well as those who we are responsible for and allows us connections with others through social, family, and professional roles that reflect our personal selves. Work-related injuries are experienced on an individual, family, and social level. By definition, they jeopardize a person's work and health temporarily or permanently. Nearly 750,000 work-related injuries are reported each year in California and are known to be under representative of the actual number of workplace injuries (Pransky, Snyder, Dembe, & Himmelstein, 1999). These *reported cases* affect individuals in their role as parents, spouses, co-workers, and family members, who work to provide food, shelter, and resources for themselves and their families.

By virtue of the injury occurring at work, there are many stakeholders connected with the injured worker's experience of disability, including his or her co-workers, supervisor, employer, medical providers, insurance personnel, and others within the workers' compensation system (e.g., lawyers and judges). These participants manifest a distinct influence on the experience of injury and disability through their interactions with the individual. Interactions vary and have a differing degree of influence, depending on the intentions and perceptions of those involved and their relationship to the disabled worker. For example, a supervisor who is unsupportive of the injured worker's claim may create an atmosphere that inhibits the worker's access to benefits, or he or she may make it difficult for the injured worker to return to work. An intervening party, such as a supportive and caring co-worker, or an insurance adjustor who can facilitate the flow of

benefits, may help overcome negative influences. In another case, a medical provider may assist workers who struggle to adjust to physical and financial changes by providing timely information to those in charge of administering benefits or by simply acknowledging the impact of the injury to the worker. Such acknowledgements may have a significantly positive influence on the outcome of rehabilitation efforts. Ultimately, the disabled worker processes the significance of these interactions, which may become internalized as the injured worker's *new* or *changed* meaning of self.

The individual must live with this new self, as will others in the family and community. It is important to gain a full perspective of experience of the worker's *loss of ability* or *disability*, following a work injury, to add greater balance to the existing literature, the bulk of which focuses on measuring loss using quantifiable variables such as income, debt, physical function, et cetera (Keogh, Nuwayhid, Gordon, & Gucer, 2000; Morse, Dillon, Warren, Levenstein, & Warren, 1998; Pransky et al., 2000). This understanding will add to the existing research that describes injured workers' experiences, much of which is voiced as frustration related to the workers' compensation system and is the focus of this study (Fife, 1994; Strunin & Boden, 2004).

Development of Self-Meaning and its Consequences

Self-meaning, experienced as identity, is acquired from perceptions, experiences, and relationships with others (Blumer, 1969). Therefore, exploring the complex sources that contribute to how injured workers feel about themselves promotes understanding of the disabled worker's subsequent actions and behaviors. Using symbolic interactionism as a theoretical framework to understand the concept of *internalized meaning* serves as a

guide for the methodology and analysis, allowing an understanding of the phenomenon to emerge.

Entitlement to disability benefits, including medical treatment and indemnity, is reliant on a medical opinion that either supports a connection between a worker's job and the injury or does not. Because disability is an intimate physical and emotional experience, qualifying for disability benefits can be experienced as legitimization to the individual. However, quantifying such things as pain, injury, suffering, or disability is difficult. Such difficulties may result in a delay or denial of benefits based on assumptions that the complaints are false or the suspicion that, although the complaints are valid, their relationship to work is not. This paradigm gives rise to the question, "How is meaning of the *disabled self* internalized when injury is denied by the system entrusted to support the injured worker?"

Individuals with chronic health conditions, including those with disabilities, experience life in an altered world (Charmaz, 1983). Their experience is dynamic, progressive, and involves others beyond the self. Communication imparts a qualitative context to the experience as a tool by which acceptance of the disabled person is either facilitated or hindered. Language and labels used by outsiders provide entrée into how others perceive the disabled, and the social context in which individuals internalize *being* disabled.

As shown in the occupational health literature, most injured workers obtain medical treatment and return to their usual work duties or another form of productive employment with little or no lost time (Biddle, Roberts, Rosenman, & Welch, 1998; Blanc, Jones, Besson, Katz, & Yelin, 1993; Cheadle et al., 1994). Of the 4.2 million

reported work-related injuries in 2005, only 1.2 million involved lost workdays (DOL, 2007). At the same time, it is well documented that the number of reported cases represents only a fraction of the actual number of work injuries experienced by workers (Morse et al., 1998; Shannon & Lowe, 2002). By working while they are injured, they become the *working wounded*; that is, they are at work but not fully able to perform the work. The consequences in the workplace when workers work when they are wounded involve not only the individual worker, but also co-workers who rely on them for help, which could impact the larger work environment as well.

The social, family, and workplace consequences experienced by workers who report an injury are not well understood, partly because of the limited number of studies that allow injured workers to articulate their experiences in their own words. Employers also have a stake in this problem. The economic consequences of work injuries are staggering with costs in the mid-1990s approaching $21 billion in California (Leigh, Cone, & Harrison, 2001). However, because of the underreporting of injuries and out-of-pocket treatment expenses incurred by injured workers, employer costs for work injuries are likely grossly underestimated (Morse, 1998; Leigh & Cone 2001).

As a group, hospital workers have been studied to identify differences in worker characteristics and injury outcomes (Gillen et al., 2007; Janowitz et al., 2006; Rugulies et al., 2004). The dissertation describes a research study *Motivations and Obstacles to Employment for Injured Hospital Nurse* (MORE Nurses study) aimed at understanding the range of beliefs and experiences of injured hospital nurses. Grounded theory methodology was used to examine their direct experiences, perceptions, and interactions

with others that could have affected their self-perception and work after experiencing an injury.

Work injuries that result in the loss of a job are life-changing events with far-reaching effects (Keogh et al., 2000; Strunin & Boden, 2004). However, significant disruption can happen to workers, their families, and in the workplace, even when the injured employee can return to work or has no lost time. Moreover, such factors may influence the worker's ability to continue employment. Although the injured who returns to work may no longer be considered disabled, the effects of their injury very often linger as they attempt to find a balance between their job requirements and recovery in their personal and work lives. For hospital nurses, this balance can be particularly difficult because of persistent physical, emotional, and staffing demands found in the acute health care setting.

Area of Investigation

There is an insufficient understanding of how injured workers endure their level of disability while still maintaining their role as a worker and how they fit into the workplace after an injury. Traditionally, occupational research has favored methods that analyze quantifiable measures such as the economic impact of injuries to workers and employers, or injury prevalence within a particular industry (Cheadle et al., 1994; Faucett et al., 2001; Gillen, 1999; Krause, Dasinger, Deegan, Rudolph, & Brand, 2001; Morse et al., 1998; Pransky et al., 2000). Less commonly found is research that seeks to identify the individual's experiences and perceptions of being a disabled worker (Strunin & Boden, 2004; Sum & Frank, 2001). Overall, the field is limited in its understanding of the

personal, social, and workplace conditions that influence the injured nurse's experience of returning to work after an injury.

The cost of work-related injuries encompasses more than the economic value of benefits to injured workers. To better understand this phenomenon, it is necessary to provide context to the personal factors held by the injured nurse. Without this context, less effective interventions aimed at reducing costs and keeping nurses in the workplace may be implemented, missing an important opportunity for more advantageous outcomes.

Purpose of this Study

The purpose of this study was to explore the experiences and perceptions of being an injured worker. Specific aims were to:

1. Describe the subjective meaning of loss of ability and its full impact on an injured worker's life.
2. Understand the influences of work climate on the injured worker's experience.
3. Identify motivational and or obstructive factors that influence work ability.

Participants were individually interviewed using semi-structured, open-ended questions to allow them an opportunity to use their own words to describe their experience. Because nurse co-workers, who are part of the clinical team, offer unique insight into the work climate of the injured nurse (Gheldof, Vinck, Vlaeyen, Hidding, & Crombez, 2005; Hetu, Getty, & Waridel, 1994), effort will be made to included non-injured nurses in the sample if possible. To gain insight into this problem, an effort was made to include nurses across the spectrum of those who provide inpatient care, rather than limiting the sample to one particular unit within the hospital.

Significance to the National Institute for Occupational Safety and Health Research Agenda

Work-related injures are costly to the individual and to society. Research findings estimate that the total economic costs of occupational injuries and illness is comparable to those associated with cancer and heart disease (Leigh, Waehrer, Miller, & Keenan, 2004). In addition, there are non-economic consequences that affect quality of life for those involved. Such effects, as with any other major injury or disability, encompass all aspects of life extending beyond the injured worker to his or her family, workplace, community, and society. Although millions of occupational injuries occur each year in the United States, the human and personal economic impact has not yet been adequately studied or understood (Boden, Biddle, & Spieler, 2001).

Recognition of the importance of expanding an understanding of the effects of work injuries is evidenced by governmental support for research in this area. The National Institute for Occupational Safety and Health (NIOSH) set forth 21 priority research areas, one of which was the Social and Economic Consequences of Workplace Illness and Injury (NIOSH, 2005). In 1999, NIOSH hosted a conference to discuss the occupational research related to this area as well as to propose areas for future research (Boden et al., 2001). Five major themes associated with the social and economic consequences of work-place injuries emerged from the conference:

1. Workers' costs of workplace illness and injuries
2. Employers' costs of occupational illness and injuries
3. Improving the understanding of return to work
4. Utilizing workers' compensation

5. Adequacy of workers' compensation

This current study was designed to provide insight into themes associated with four of these five areas. Given the nature of the study, it was not possible to address employer costs.

Significance to Nursing

Understanding the consequences of being an injured nurse in the workplace is significant for nursing because hospital nursing is the foundation for the development of nursing skills for newly trained nurses and represents the essence of the professional role. As health care consumers, the public may also benefit from research that explains factors useful in maximizing the number of nurses available to provide care. The shortage of skilled nurses is linked to many factors including an aging workforce and an unprecedented array of non-hospital roles for nurses. The rigors of bedside nursing are evidenced by numbers that reflect the highest rate of musculoskeletal injuries of any profession (Nelson et al., 2005). Injury costs compound other economic demands that hospitals face in providing care for patients. Nonetheless, hospitals cannot afford to treat nurses as a disposable workforce. Regardless of injury and disability rates, it is widely reported that the existing nursing shortage is expected to worsen in the United States (AACN, 2007). The current shortage has required creative staffing methods, including the use of travel nurses and per diem workers who may impact the workplace in unexpected ways. Therefore, there is a dire need to maintain the employability and retention of invested and experienced nurses. The evaluation of influences from work climate, including co-worker support, the workers' compensation system, and the injury

experience itself, allows a spectrum of issues experienced by hospital nurses to emerge, which can inhibit or motivate them as they return to and maintain their work.

Although nurses make up the largest single group of hospital workers, the public has limited knowledge of their educational requirements, range of work duties and responsibilities, or the demanding settings in which they work their 8 to 12 hours shifts, often putting in mandatory overtime to finish their patient assignments (Trinkoff, Lipscomb, Geiger-Brown, Storr, & Brady, 2003). A familiar characteristic of the hospital nurse's environment is the close working relationship that nurses have with each other. Within the hospital setting, nurses often specialize in a particular area of practice associated with a specific hospital unit. Nurses share a common identity within their work setting and are frequently dependent on those on their team to fulfill work assignments. Allowing nurses to describe ways that have contributed an understanding of how they view themselves as nurses while delving into their experiences of injury provided a context for understanding how the meaning of *self* influences perceptions, beliefs, and behavior.

In addition to discovering unknown experiences of injured nurses, this study may potentially aid hospitals in seeking ways to retain one of their most valuable resource—nurses (Apker, Ford, & Fox, 2003; Ndiwane, 2000). Nurses are held in high esteem by the public and outnumber any other group of the health care team. In fact, in 1999 when Gallup conducted its first poll of honesty and ethics in professions including doctors and nurses, 73% of the nurses were rated as high or very high in honesty and ethical standards, while only 58% of physicians were rated in this way (Buresh & Gordon, 2000). Therefore, it may be in the best interest of hospital administrators to recognize the

public trust that nurses engender and find new ways to promote nurse retention in a changing workplace.

Definition of Terms

Injured worker: An employee who has incurred an injury or illness in the course and scope of employment, whether or not the injury was reported.

Disability: Temporary or permanent residual effects of injury or illness.

Workers' compensation: State-funded, no-fault insurance coverage paid for by the employer to cover medical treatment and indemnity compensation to injured workers.

Work climate: The work environment that encompasses the physical space, policies and procedures affecting the work setting, and co-worker interactions necessary to complete job duties.

CHAPTER TWO: WHAT IS KNOWN OF THE INJURED WORKER'S EXPERIENCE?

Introduction

Here the body of literature related to the worker's experience of injury will be reviewed. Several facets of the injured worker's world are included to gain a wider understanding of the common experiences. First, a review of occupational health research lays a foundation for a range of factors encompassed by the injured worker's experience. Second, since occupational research alone has not been sufficient to gain a full understanding of experiences, such as job interruption or loss, and acquired disability, research outside occupational health also is included. By integrating research findings in this manner, gaps in understanding that are specific to the injured worker's experience are exposed, and meaningful additional research can be proposed.

The historical context of the definition of disability among different governing agencies will be presented, followed by a review of studies organized by four categories of the injured worker's experience: work injury, work meaning, compensation system, and being a disabled person.

Defining Disability

There are several variations on the definition of disability, even among government agencies that provide benefits to the disabled. The 1934 Social Security Act (SSA) and the 1990 Americans with Disability Act (ADA) are two federal programs that offer services to disabled workers. The Social Security Act defines disability as an "inability to engage in any substantial gainful activity for any medically determinable physical or mental impairment, which can be

expected to result in death or which has lasted or is expected to last for a continuous period of not less than 12 months." The disability must be so severe as to prevent any "substantial gainful work, which exists in the national economy," and must be "demonstrable by medically acceptable clinical and laboratory diagnostic techniques" (Social Security, 2003, p.29). The ADA, however, defines a person with a disability as any person who "has a physical or mental impairment, which substantially limits a major life activity, has a record or history of such impairment, or is regarded as having such an impairment" (Americans with Disability Act, 1990). The ADA was intended to promote employment of the disabled. However, phrases such as "substantially limits" and "major life activity" have required further clarification, necessitating debate in the courts (Guzik, 1999). Workers' Compensation in California only recognizes permanent disability that results from loss of function as described within the American Medical Association Guidelines or as defined by the courts in disputed cases (Senate Bill 899).

For the purpose of this review, the definition used by the World Health Organization is used to describe the injured worker's experience:

> An impairment is any loss or abnormality of psychological, physiological, or anatomical structure or function; a disability is any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being; a handicap is a disadvantage for a given individual, resulting from an impairment or disability, that prevents the fulfillment of a role that is considered normal (depending on age, sex, and social and cultural factors) for the individual (Susman, 1994, p. 15).

Work Injury and Compensation: Historical Context

To understand the range of meaning imparted by the workers' compensation system, it is important to consider the culture in which the system was born. With the onset of the industrial revolution, work-related injuries became increasingly common. Generally, injuries were accompanied by job loss, a lack of medical coverage, and economic disaster for individuals and their families. Initially, workplace injuries were governed under common law, which made it extremely difficult for workers to receive favorable decisions, even in the most egregious cases. Under common law doctrine, only a small fraction of employers were found responsible for workplace injury or illness; therefore, no benefits—not even medical treatment—were due. A case reported in New York during the early 1900s illustrates the point. It involved a girl who had contracted tuberculosis and was denied damages when the court found that *she* was at fault for her disease:

> The plaintiff was fully aware of the conditions under which she worked. It is from her own testimony that we learned that the walls of the cellar were wet to the touch; that a cesspool backed up liquids which wet the floor; that the cellar was devoid of windows; that dead rats were left about; that the odors were vile; that no fires were kept in the upstairs rooms; that the plaintiff worked in a drafty place; that the upstairs room was damp. It is common knowledge that such conditions are deleterious to health. We think that the plaintiff, as a matter of law, assumed the risk attendant upon remaining in the employment, and that the recovery may not stand (Thornton, 1966, p. 208).

Media reporting of such outrageous cases played a part in bringing conditions to the public's attention. Exposing the extent of workplace injuries and skewed litigation outcomes resulted in a surge of sympathy for victims. The shift in perception in favor of workers empowered employees and became a cause of concern to employers who had been in control of both the workplace and the worker. Records show that with

increasingly liberal interpretations of the laws allowing more decisions in favor of employees, the economic consequences for employers was enough to encourage the compromises that led to a system of worker compensation (Shore, 1980).

In California, the Boynton Act of 1913 became the basis of today's workers' compensation system. Since then, employers have provided "no fault" coverage to all employees, although employees are generally prohibited from suing the employer for negligence or pain and suffering due to workplace injuries. At its inception, workers' compensation provided a system that required both sides to compromise. Injured workers could expect medical care at the onset of their injury as well as indemnity compensation for injuries resulting in permanent disability. At the same time, employers no longer had to fear a court ruling for punitive damages, even if the employer's negligent actions or policies contributed to the worker's injury. With the purchase of compensation insurance, employers provided coverage to injured workers, incurred a minimum of risk from catastrophic losses, and incorporated the somewhat controllable premium costs as a cost of doing business, reflected in the pricing structure of goods.

Meaning of Work: Historical Context of Influences

The system of compensating injured workers came about as a consequence, perhaps even a concession by employers, to control risk, safety, and productivity that began to threaten mass-production in the expanding climate of economic prosperity of the late 1800s and early 1900s. At the same time, management theorists such as Fredrick Taylor (1859-1915), a mechanical engineer, began asking questions about *how* work was being done. Using time and motion studies, his analysis eventually led to the breakdown of work into small increments (Taylor, 1997). Doing so allowed work tasks to be

standardized for the purpose of increasing productivity for the employer. Offering pay incentives to workers who were high producers initiated a concept that minimized the worker's sense of individualism and paved the way for huge gains in industrial growth throughout the 19th century.

The inception of piecework and the development of uniform methods of completing a task are credited with a new way of work now known as the assembly line. Not surprisingly, workers often resented this new way of working due, in part, to their perceptions of unachievable productivity goals. Another important consequence of his philosophy of work methods, which became known as Taylorism, was the organization of work into a hierarchy, which led to impersonal relationships between the workers and supervisors. Taking Taylor's work of time management even farther, Frank (1868-1924) and Lillian Gilbreth (1878-1972), partners in their own management consulting firm, perfected time and motion study as a method of work/worker analysis.

The Gilbreth's management consulting firm became well known for maximizing worker productivity by minimizing time wasted by workers. Workers were watched, timed, measured, and trained to perform their assigned tasks in new ways with the goal of greater productivity (Gilbreth, 2005). For example, it was Gilbreth's observations of doctors and nurses in the operating room that are credited with the now standard practice of the surgeon's outstretched open hand-palm up, awaiting the trained assistant's ready placement of the appropriate instrument. The almost mechanical display of worker efficiency was valued by employers for its minimal need for communication, time, and motion while completing a job task with maximum efficiency.

Unquestionably, the beginning of the industrial revolution brought the convergence of increasing workplace hazards and increased demands for worker efficiency, creating a climate of uncertainty for the worker as an individual. The overall perception of the work climate at the time was that workplace injuries were an unavoidable outcome of employment, and workers were increasingly devalued –even considered extensions of machinery. In fact, a judgment recorded by the 1917 U.S. Supreme Court suggested that workers were analogous to machines when it considered the employee's loss of earning power was "…an expense of the operation, as truly as the cost of repairing broken machinery" (Duncan, 2003, p. 453). With jobs broken into units of tasks that any person could do with minimal training, workers could be easily replaced for various reasons, including disability.

More recently, economists who often view work solely as a means of making money, concede that the qualitative aspects of paid work go beyond purchasing power. Therefore, currently their work draws from the social sciences to encompass knowledge of work's meaning as a creative and socially engaging activity for individuals (Gill, 2000).

Review of the Research Literature –Work Injury: Impact on Self and Others

Multiple work injury studies were reviewed for this category, but four studies are particularly relevant. They are distinguished in the literature by their expansive content, large sample size, broad significance of their findings, and their contribution to additional research topics. They are primarily derived from epidemiologic studies using large data

sets. These sources demonstrate the diversity of occupational research studies and highlight work injuries as an issue of worldwide importance in public health

Understanding the Duration of Disability

Cheadle et al. (1994) selected a random sample (74% of whom were men) from more than 28,000 workers who filed claims in Washington State during 1987-1989 to measure lost time from work and to explore factors that contribute to the duration of disability for musculoskeletal injuries. This study defined disability as the loss of capacity to meet occupational demands as opposed to loss of personal or social functioning. The mean follow-up time was approximately 36 months. Using multivariate survival analysis, the researchers examined the effects of predictor variables, including age; gender; marital status; type of injury; county of injury; type of work setting; hospitalization status; and length of disability.

Patients with carpal tunnel syndrome or neck and back strains had a higher mean length of disability (160 days and 146 days, respectively) compared with all other injuries (91 days). Overall, injuries did not result in lost time from work. Survival analysis showed that more than 50% of the injured workers had returned to work at 1 month, followed by 18% with at least 6 months of lost time, and 7% involved at least 2 years of lost time. Only 12% of those claims, in which at least 6 months of lost time accumulated, resulted in injuries requiring hospitalization within 1 month of injury.

In the multivariate analysis, the largest effects on length of work absence involved hospitalization (relative hazard [RH] = 0.48, 95% confidence interval [CI], 0.46-0.51), carpal tunnel injuries (RH = 0.55, 95% CI = 0.50-0.60) and older age (RH = 0.67, 95% CI = 0.64-0.69). The duration of disability that was related to carpal tunnel claims (159.9

days) was consistent across all 3 years; however, these cases only represented 2% of the sample. Other significant predictors of duration of disability included working for an employer with 50 or fewer employees, living in a county with high unemployment, and performing construction or agricultural work. Of significance, wage replacement had no effect on duration of disability.

This study is important because it differs from other studies in three ways: 1) predictors were not predictive based on a specific injury type, 2) it used a large population-based sample, and 3) it adjusted for injury severity. Overall, it identified specific subgroups targeted for interventions that could be aimed at reducing the duration of disability and associated costs.

One limitation of the study is that the results are specific to Washington State. Although the state does have a relatively diverse industry profile, many of the larger employers were self-insured and were excluded from the study. In addition, the study was based on an administrative database that was subject to data entry and misclassification errors.

Personal, Social and Economic Consequences of Work Injury

In another study, Morse et al. (1998) examined the social and economic consequences of persistent work-related musculoskeletal disorders (WRMSD) claim, which focused solely on upper-extremity disorders. In a population-based telephone survey of Connecticut workers, the study screened 3,200 households using random-digit dialing. The final sample included 292 cases and 551 controls (with a response rate of 78%). Cases were defined as those who reported non-acute significant pain in the arm, shoulder, hand, or neck.

The economic impact of WRMSDs was measured by out-of-pocket expenses. They found that 11% of subjects reported having out-of-pocket expenses related to their injury for items such as medical care, transportation, equipment, childcare, and work around the house. The mean out-of-pocket cost was $177, with a median of $38. Using WRMSD prevalence figures from Connecticut, this finding was extrapolated to project yearly out-of-pocket expenses of $71 million for Connecticut alone. The study, which used random digit dialing rather than reported claims to contact subjects, found that 90% of WRMSDs cases were not reported as workers' compensation claims. Therefore, the economic burden for these cases fell on other sources of payment such as family resources (8%), governmental sources (2.4%), and unspecified sources (71%).

As for social or family consequences, when injured workers were compared with the control group, they were significantly more likely to be divorced (odds ratio [OR] = 1.91, 95% CI = 1.01-3.58); to lose their home (OR = 3.44, 95% CI = 1.14-10.35), car (OR = 2.45, 95% CI = 1.04-5.47), or health insurance (OR = 1.91, 95% CI = 0.99-3.71); or to have moved for financial reasons (OR = 2.41, 95% CI = 1.20-4.86) following their injury. A somewhat confusing finding was that workers with WRMSDs were less likely to take time off from work (OR = 0.68, 95% CI = 0.49-0.93) compared with controls. This suggests that workers may have felt obligated to keep working despite having pain.

The functional impact of injury was reflected by the finding that nearly 50% of the workers reduced their activities at home, and 35% who reduced their work activity did so because of their WRMSDs. Cases were shown to have significantly greater difficulties in all activities of daily living than controls. Difficulty in bathing was experienced more by cases than controls (OR = 35.2, 95% CI = 16.0-77.2). For driving

and writing, the odds ratios were 22.6 (95% CI = 12.8-39.7) and 11.8 (95% CI = 7.2-19.2), respectively. Interestingly, even workers who attributed their difficulty performing activities of daily living (ADLs) to their WRMSDs were still not as likely to have filed a claim for benefits (OR = 0.227, $p = .001$).

Overall the findings contribute to an understanding of the deeply personal, social, and economic consequences of common WRMSDs. One strength of the study was the full range of work-related economic and personal consequences of disability reported. Furthermore, the study is unique because it provides information about payment sources for injuries as well as the spectrum of costs to the worker and family rather than the cost of WRMSDs to the employer or the insurance carrier. It also demonstrated that WRMSDs in the sample were dramatically underreported. A limitation of the study is the design, which included self reported retrospective responses, which can result in lost or inaccurate data.

Following this report by Morse et al. (1998), Keogh et al. (2000) expanded the understanding of the long-term impact of such injuries by assessing health, function, and family outcomes in patients with upper-extremity-cumulative trauma disorders (UECTDs) that were reported to the Maryland Workers' Compensation Commission during a 33-month period during 1994-1996. Of the 5,257 potential claimants, 42% were contacted and 537 met the inclusion criteria. Compared with those who agreed to the interview, those who were not reached or who refused were younger (mean age was 38 compared with 41), more likely to be male (54% compared with 47%), had lower weekly pay (mean weekly wage was $469 compared with $512) and were less likely to be married (43% compared with 62%) (all $p = < .001$).

A computer-assisted telephone interview included items about personal, job, and work-place characteristics as well as ADLs. The researchers also administered two validated scales, the Center for Epidemiologic Studies Depression Scale, which measures depression and anxiety, and a new measure of functional impairment developed by the University of Maryland (UM- ADL). The Cronbach's alpha of the UM-ADL for use with this population was 0.93; validity was assessed using a single-item measure about function (r = -0.563). A dichotomous variable measuring functional status (0 = no problem; 1 = any problem) was used as the outcome variable.

The average interview was conducted 28 months after the injury with a range of 11 to 46 months. The sample was comprised of 69% women (n = 373) and 63% who were married (n = 341). Participants had a mean age of 42 years (SD = 9.5), earned an average of $508 per week, and 84% reported receiving medical care paid for by workers' compensation. Job loss was reported by 78% of respondents who reported receiving wage loss compensation. Based on self-report, carpal tunnel syndrome was the most common diagnosis (78%), but 71% reported that they received more than one diagnosis.

Although respondents were, on average, interviewed 28 months post-injury, 79% felt they had recovered as much as they were going to, even though persistent symptoms interfered with their activities, including job performance (53.4%), work at home (63.9%), and sleep (44.1%). An astonishingly high percent (38%) indicated that they had lost their job because they were laid off or fired because of their injury. Most job loss occurred in the first year of disability. At the time of the interview, 28% reported being out of work.

When asked about functional impairment, 81% of respondents felt they were impaired by their injury. Loss of function was measured using questions about ADLs common in daily life such as turning a key, pushing a door open, writing with a pen, and carrying a small bag of groceries. When all the responses were totaled (10,708 responses), only 64% of the responses showed that the participants could perform these tasks without difficulty. Women reported more difficulty performing ADLs compared with men. Nearly 50% of the subjects indicated that they had family problems as a result of their injury and about 33% experienced financial difficulties evidenced by borrowing money from friends or being contacted by a collection agency. Job loss also was more common in women than men (44% and 31%, respectively). Although 78% of the respondents reported receiving workers' compensation for wages lost, they nonetheless had serious financial loss at the time of the interview.

Those diagnosed with carpal tunnel syndrome had scores indicating depression compared with the general population (33% and 20%, respectively). Those with less education had even higher depression scores; 40% of those with less than a high school education showed depression scores. Finally, this study showed that subjects with higher income and union status were more likely to have kept their same job following their injury (higher income: OR = 1.31, 95% CI =1.11-1.55; union status: OR = 2.68, 95% CI = 1.71-4.18).

These findings indicate profound and long-term functional impairment of persons with carpal tunnel syndrome and severe consequences to the worker, family, and society (Keogh et al., 2000). Of all the reported findings, perhaps those reported in connection with family problems (48.7%) are the most troublesome as they reveal a depth of

suffering experienced by not just the worker, but his or her family as well. This type of suffering generally is not considered part of work disability. By bringing this to the forefront, the study provided insight into loss of the job, property, and intimate relationships that contribute to the experience of suffering.

Limitations of the study include the author's acknowledgment of the underreporting of workers' compensation claims, from which the sample is drawn. This may indicate that the findings are even more significant than actually reported. Another difficulty with the design was that, in some cases, interviews occurred almost 4 years from the claim filing date, which could lead to participant recall and historical bias. Strengths of the study include the comprehensiveness of questionnaire, the integration of social, family, and emotional components of work disability, and the large sample size.

Another major study complemented Keogh's findings by evaluation of non-work-related consequences of occupational injuries. Pransky et al. (2000) conducted a community-based study derived from upper extremity (UE) and low back (LB) claims filed by workers in New Hampshire. The study used a self-reported questionnaire, mailed between July 1996 and August 1996, and focus group methodology to develop study questions. The final sample (n = 169) was only 46% of the original pool, but represents 80% of those whose addresses could be verified. Of those, 60% reported LB injuries and 40%, UE injuries. The sample characteristics included 71% of participants who had worked for the same employer for 1 year or more at the time of injury, and 38% with the same employer for 6 or more years. In addition, workers who had training beyond high school (47.3%); were married (63.7%); and performed manual work (24%), skilled craft (23%), or service work (18%), although no particular job category dominated the sample.

Measurement tools included the Back Pain/Disability subscale of the North American Spine Society Survey for disease-specific functional status LB injuries and the Upper Extremity Functional Status Scale. The SF-12, which has two subscales, the Physical Component Subscale (PCS-12) and Mental Component Subscale (MCS-12), was used as a generic measure of health. Domains measured by the questionnaire include work outcomes; functional outcomes; economic and social consequences; employee, employer, insurer, and treatment characteristics.

Study findings showed that 61% of workers had gone back to work with the same employer they had when the injury occurred and 86% of them to the same job. For those who changed employers after injury, only one third were doing the same job they had been doing at time of injury. Respondents showed significant differences in functional status by lost time from work status. Those who lost a week or more had significantly lower PCS-12 scores ($p < .001$) compared with those found in the general population. Of respondents working at the time of the survey, 56% reported symptoms that were worse at the end of their workday (76% LB and 28% UE, $p < .001$). Re-injury was common for those who returned to work: 41% for LB and 26% for UE respondents ($p < .05$), with 40% attributing re-injury to work compared with 25% to non-work related causes. Sixty percent of respondents reported that their doctor did not give them advice on prevention of re-injury.

Anxiety scores (range from 1-5 with higher scores indicating greater anxiety) differed among those who lost less than a week of work (1.5), those who lost a week or more (2.3), and those who had not returned to work (3.7). Similar to results reported by Keogh (2000), workers suffered significant economic consequences with a strong

association between length of time out of work and financial consequences such as problem paying bills, borrowing money, and selling one's belongings ($p < .001$). Sources of payment for injury treatment were covered by the workers' compensation carrier for 81% of respondents, while 13% used other forms of insurance. Twenty-one percent of respondents with LB injuries reported out-of-pocket expenses compared with 10% of those with UE injuries ($p < .05$). When asked about the handling of the claim by the compensation carrier, only 68% reported satisfaction.

As with the previous three studies, these findings reveal serious consequences of occupational injuries that extend beyond the individual worker. Here for the first time, anxiety is measured in connection with persistent loss of function, which sheds light on the quality of life for the individual and family. These outcomes indicate that the impact of work injuries encompass much more than lost time from work. They represent a degradation of physical function, catastrophic financial difficulties, and substantial increased anxiety. These non–work-related consequences may contribute to factors that prolong the worker's return to work following an injury, yet often fall outside the compensation system of treatment or indemnity.

There are several strengths of this study, including the use of a community-based population sample. By using focus groups, the types of questions used in this survey were carefully crafted to capture non-work consequences of work injury not previously studied. In addition, both the specificity that went into the selection of measurement tools and the detailed pre-planning that focused attention on employee, employer, insurance, and treatment characteristics added depth and breadth to the study.

The weaknesses of this study pertain to the reliance on self-reporting as the only source of information. The data are retrospective, which may result in recall bias or historical influences. As with other studies, the author acknowledged the issue of underreporting of workers' compensation cases as a weakness of using a claims database. Generalizability may be difficult given the sample was 95% Caucasian, which is representative of the New Hampshire population, but not of other populations.

Overall, results from these four studies indicated that occupational health research is moving toward a more thorough understanding of the complexities of personal, social, community, and societal consequences of injuries. Researchers are focusing on large groups of workers to better study the consequences of injuries over extended periods of time. Doing so has uncovered social and economic findings not commonly seen in more traditional occupational health research. This insight reveals the personal effects of injury on workers and extends the science beyond outcomes that measure work injury from the perspective of a specific medical condition, a particular worker group, or by costs associated with injury. The results of these studies provide important new knowledge, but they also provide a foundation for conducting less quantitatively structured methods of inquiry.

Studies Supporting Complex Analysis of Occupational Injury Outcomes

Personal Impact of Job Injury

Subsequent to studies conducted by Pransky et al. (2000) and Keogh et al. (2000), Strunin and Boden (2004) used open-ended ethnographic questions in a telephone survey to explore the impact of work-related back injuries on family and social roles. The sample included workers in Florida (n = 204) and Wisconsin (n = 198) who had been off

work for at least 28 days or had received a permanent disability rating. Questions focused on the workers' beliefs and attitudes about themselves pre- and post-injury; their employment and injury experiences; encounters with the medical-legal system; household work and leisure activities; and the effect of their injury on family relationships.

The integrity of the data was maintained by regular supervision of the interviewers' coding. It was consistent between groups and its reliability was checked at random. Interviews were transcribed and a computer software program managed the data themes between and among the transcripts.

Participants reported a range of limitations involving work and non-work activities. Limitations were categorized by household chores, vigorous leisure activity, outdoor chores, parental role, sedentary leisure, sexual relations, and activities of daily life. Responses were tallied by gender and presented as percentages for the two groups.

Nearly 20% of the respondents reported limitations with common daily functions such as getting out of bed, getting dressed, and sitting at a table for a meal. Limitations with tasks fell along what might be considered gender roles, with women reporting difficulty with cooking and household cleaning, and men with yard work and car repairs.

Strunin and Boden (2004, p. 6-10), provided role limitations identified by the workers.

1. Loss of gendered social role. An injured man reacting to his wife taking on tasks he once preformed. "*My wife she worked long hours. Real long hours. I mean sometimes she'd go in at nine and get off at nine…you know I do feel guilty about it today.*"

2. Helplessness as dependency and inadequacy. An injured woman remarked, "*I feel like I'm nothing, like not good for nothing.*"
3. Permanent loss of self, loss of identity. A woman described herself, "*I'm not the same person.*"
4. Depression and anger. A woman who talked of suicidal thoughts related to her need for medication said, "*I try to look on the bright side and try not to let myself get depressed…that things are going to get better. But in five years it hasn't.*"
5. Stress on spouse. An injured woman described, "*He didn't like the first two weeks after surgery when I wasn't allowed to do anything and he had to do all the cooking and sweeping and everything. He didn't care for that… He got a little ugly about it.*"
6. Joint leisure activity (couples). "*We used to be a couple that'd go out on weekends and meet with a bunch of friends…*"
7. Stress on children. "*The pain puts pressure on you so you're going to have pressure with your kids….*"
8. Child-parent activities. "*My son had to get up and go to school all by himself…it was pretty tragic…it was pretty tough on him…he'd just go to school and sit there.*"

The changes experienced by the injured worker led to restructuring of family and social roles, along with the worker's self-identity. Injured workers reported experiencing guilt, anger, and depression as a consequence of their functional limitations and pain. The interviews described suffering resulting from deprivation, de-legitimatization, and social

isolation. The experience of acquired disability violated their own expectations about their social role, then disrupted family roles and became cyclical.

The injured workers own words provided a context than cannot be fully captured by standardized questions. Overall, the major findings corroborated the ripple effect of job injury as it affects both the individual and others in work and non-work activities as described by Keogh (2000), Morse (1998), and Pransky (2002).

There are several weaknesses in this study. Payment of $200 per interview may have compromised the credibility of the data, though this appears unlikely given the poignancy of the comments. There were some differences in the degree of probing of some questions between the two groups that resulted in a difference in reporting and made comparisons between the two groups problematic. The biggest difficulty is the potential for historical bias since the interviews were conducted 6 years post-injury. On the other hand, the delay may have allowed a fuller dimension of the impact to be better realized. A major criticism of the study is the lack of disclosure regarding the process of data analysis techniques other than to mention that computer software was used. It is unclear why the authors would exclude this important description because doing so would have greatly enhanced the credibility of the findings.

As seen in the prior studies, lost earnings are an obvious consequence of work injury and one that is difficult from which to recover. A study by Boden and Galizzi (1999) examined personal earnings lost after a work-place injury by calculating both current losses and estimating lost future earnings. They used a sample of men (n = 47,910) and women (n = 22,467) who had filed claims in Wisconsin in 1989-1990. Cases were compared with a control group of workers who had short-term temporary disability

(7-10 days) with no permanent disability. Pre-tax dollars that were lost, which were considered a better measure of the social costs of lost work time, for men and women combined during the study period totaled $532,363,276 (in 1994 dollars).

The researchers found that injured workers suffered economic losses long after their benefits were discontinued. These findings are strengthened by the use of individual claims–cost data. A weakness of the study is that it is specific to Wisconsin workers and the compensation system in that state. It also excluded workers who had lost less than 8 days of work, those whose injuries were fatal, with total disability, and who had more than one injury. Hence, the findings from this study are both somewhat limited and conservative. Another drawback of this study was that it employed a model of earnings that relied on an assumption that all workers in the study would have had the same earnings had they not been injured. Failure to measure collateral employment benefits lost, such as a worker's skill level, pension contribution, and a family health care benefit, or calculating the replacement rate, further underestimates the loss of dollars to the injured worker.

A study by Brodsky (1977) focused specifically on suicide attributed to workers' compensation claims. A convenience sample (n = 33) included 9 cases of completed suicides. It also included 24 cases of suicide attempts, many of which resulted in profound disability. The author, a psychiatrist who served as an agreed-upon medical examiner in the workers' compensation system, had evaluated all of the subjects who attempted suicide and two of those who had completed suicide. The individuals or their survivors indicated that injuries arising from work or the subsequent work disability were the primary causes of the suicidal act. A lack of aptitude and skills, unachievable work

demands, and lack of control over sudden job change were seen as contributors to suicide.

The work-related disability was seen as a contributor to suicide through factors that included pain and limitation of motion; impairment resulting in life style change; loss of support systems; change in status in family; and fragility of families. The experience of disability, which was experienced by making simple tasks impossible, made adapting to work demands difficult and was tied to decreased feelings of self-esteem. However, changes in family relationships were found to be the most important factor of disability leading to suicidal behavior.

This study, conducted by a medical provider who was also experienced with the workers' compensation system, offered particular insight into an example of the highest price paid by a disabled worker–suicide. Although the sample is limited in its size and scope, the study is nonetheless informative and is consistent with the serious effects of disability found in other studies (Keefe et al., 2002; L. Strunin & L.I. Boden, 2004).

How Work Imparts Meaning

Job Meaning Measured by Job Loss

One way of studying the range of experiences specific to work is to select a group of workers with stable employment and who subsequently lost their job. An informative body of work regarding the experience of job loss has been published focusing on plant closings and unemployment (Beale & Nethercott, 1985; Keefe et al., 2002; Morris & Cook, 1991; Westin, 1990). Although these studies do not involve disabled workers, valuable insight is gained from research on worker groups who, like many disabled workers, are involuntarily unable to continue working.

In the first of three factory-closing studies, Beale and Nethercott (1985) conducted a longitudinal study to investigate the consequences of unemployment on health. The study focused on a manufacturing plant in England that had been the primary place of employment in the town until it closed in July 1982. The sample (62% male) included 129 workers under the age of retirement, 74 spouses and 72 dependent children. The control group (n=99) consisted of 77 men and 22 women from other local employers, not subject to layoff, along with 66 spouses and 55 children. The study period from July 1976 until June 1984, relied on data obtained from medical records of employees and their families to determine: 1) medical consultations; 2) episodes of illness; 3) hospital referrals; and 4) visits to outpatient departments of workers and their families. The Mann-Whitney U test and the Wilcoxon rank sum test were used to analyze study results. Jobs were defined as secure (in years 1-4), insecure (in years 5-6), and lost (in years 7-8).

The study showed that the number of family medical consultations increased by 20% ($p < .01$), consultations for male employees increased 10% ($p < .05$), and 15% for women ($p < .05$). The episodes of illness rose significantly from 9.2 before job loss to 24.7 after job loss ($p < .05$). Comparison of consultations for years 1-4, with years 5-8, showed an increase by 20.1% ($p < .01$) for all subject families, and by 16.5% ($p < .05$) for all subject employees.

The data support the fact that unemployment is more than merely an issue of obvious economic consequence but encompasses issues of health and wellness of the worker and family, as well as evidenced by the increase in treatment long after the plant closed. Nonetheless, it is difficult in such studies to rule out the selection effect, which is a weakness.

Subsequent to the Beale (1995) study, Keefe et al. (2001) studied the association between involuntary job loss on serious illness and mortality among workers from two meat-packing plants in New Zealand. Workers (n=1945) from a plant that shut down in 1986 were compared with a control group from a nearby plant that remained open until 1994 (n=1767) for incidences of mortality, cancer, and hospital admissions. There was a 96% completion rate for the 8-year follow-up conducted from 1986 to 1994. Of note, 45% of the cases were Maori.

When analyzed for mortality, cases showed very high risk of suicide (n = 7) with a relative risk (RR) of 2.15 (95% CI = .56-8.836, $p = .027$) compared with controls (n = 3). Additionally, cases were at increased risk for internal injuries (RR = 1.90, 95% CI = .66-5.47, $p = .24$) compared with controls (n = 5). Hospital admissions showed similar increases for fatal and non-fatal self-inflicted injuries (cases = 14, controls = 4), RR = 3.16 (95% CI = 1.04-9.62, $p = .43$). The unadjusted risk for self-inflicted fatal and non-fatal injury (RR = 2.49, 95% CI = 1.05-5.93, $p = .39$) was stable when adjusted for age, sex, and ethnicity (RR = 2.47, 95% CI = 1.04-5.89, $p = .41$), previous mental health admission (RR = 2.37, 95% CI = 1.00-5.65, $p = .51$), and previous mental health admission, age, sex, and ethnicity (RR = 2.34, 95% CI = .98-5.59, $p = .056$).

Finding that exposure to involuntary job loss more than doubled the risk of self-harm during the 8-year period following plant closure contributes greatly to our understanding of perhaps the most wrenching consequences of job loss. Because this particular study variable was limited to incidences of self-harm that resulted in hospitalizations lasting more than 24 hours, the numbers may not reflect the actual number of cases who resorted to self-harm.

There are several strengths of this study including the large number of workers available, the length of follow up, and the use of controls from a neighboring plant. A weakness of any follow up study is the influence of historical factors, including national employment and economic changes that potentially confound the findings. A notable potential confounding factor pertains to the control group who were aware of their own pending job loss during the latter part of the study.

There are few studies that measure physiologic evidence of stress associated with loss of work; however, one such study was found. Baum et al. (1986) explored the link between unemployment and learned helplessness by measuring physiological and behavioral changes. Using a cross-sectional design, unemployed subjects recruited by newspaper announcement and the Employment Securities Administration in Maryland were divided into those with less than 3 weeks of job loss, those with 3-8 weeks, and more than 8 weeks. The objective of the study was to demonstrate stress-related effects of unemployment, assess helplessness-like effects of unemployment, and examine the relationship between behavior and control during unemployment (Baum, Fleming, & Reddy, 1986).

Urine samples were taken to measure epinephrine and norepinephrine levels as indicators of stress. In addition, subjects were given embedded figures task that required concentration and persistence as a measure of stress and helplessness. People initially exposed to a situation they are unable to control become angry aroused by a desire to regain control. However, with time and continued lack of control over their circumstances, their emotional state changed to one of low motivation and depression (i.e., helplessness).

The overall findings showed that those who had jobs or were recently unemployed (less than 3 weeks) had increased hormone levels, and those who were unemployed for at least 3 weeks had lower levels ($F_{(3, 32)} = 4.283$, $p < .05$). The longer subjects had been unemployed, the less they persisted at the task ($F_{(3, 36)} = 3.39$, $p < .05$).

The findings show that measures of physical and mental stress are associated with not being employed. Given the fact that so many injured workers are unemployed due to an acquired disability, these findings may suggest that outcomes could be worse for unemployed injured workers.

Work Roles and Relationships

In this category, studies of job interruption and loss illustrate the void experienced by a worker without a workplace. A common theme voiced by workers facing these issues was, *what you do is what you are*, which is an indication of how important work is in determining one's role in family and society (Freedman, 1996). This sentiment also offers a clue to what is lost when the ability to work is threatened, since workers who fear disclosing their disabilities to an employer, or are reluctant to request accommodation for fear of stigma or retaliation, make it extremely difficult to have the experience assessed. Thus job-loss studies may provide insights that contribute to our understanding of employment issues for those with acquired disabilities.

Joelson and Walquist (1987) studied the psychological meaning of job insecurity as experienced by shipyard workers in Sweden. In-depth interviews were conducted with 26 workers and their families twice per year for 2 years. It was found that unemployment comprises a four-stage process: anticipatory phase, notice of termination, termination, and unemployment. Prolonged uncertainties led to depressive reactions during the

anticipatory phase despite economic compensation during this period. The actual notice of termination often brought relief of the unknown along with self-blaming explanations as reasons for their layoff. When termination occurred, those more than 55 years of age chose premature retirement as their solution and often assumed a role of becoming sick. During this phase, collective problems of being unemployed changed to individual ones. Those who were younger than 55 years found alternate work. However, those who were older than 55 years, especially those who were single men, grew socially isolated and increased their consumption of alcohol, which are signs of developing depression.

In addition, the authors showed that unemployment threatened functional and identity factors related to work, including the balance between strain and rest, knowledge or competence, and relationships with others. An example of the men's strong identity with the job was that they continued to characterize themselves as shipyard workers, rather than as unemployed or retired, long after their job loss.

Another reported loss to these workers was the personal relationships they had with co-workers. It was the work they did together that they had in common. When work was withdrawn, workers had difficulty establishing new friendships with co-workers. One respondent reported that a shipyard worker was to be looked upon as a "man of men." How these men perceived themselves was influenced by their occupation and their ability to skillfully perform rigorous work duties. Work was a fundamental backdrop for the other parts of these worker's lives including family and leisure. Moreover, a life without work was experienced as "unproductive," and was reported as one of the most difficult adjustments to job loss. The way each individual handled work loss was determined by the compensatory mechanisms of the worker.

Observing the attributes of workplace relationships can offer insight into effects of interrupted work. The next study illustrates how work relationships affect one's quality of life at work through the aging process. Retrospective oral narrative histories of five women employed in an East Coast city were conducted over a 4-year period (Francis, 1990). The women were purposefully selected because of their similar age, education (i.e., college educated), social backgrounds, and most importantly, they had worked together for almost 40 years. Their work relationships were formed early in their employment, deepening as they spent their days at adjacent desks in civil service jobs through many years of life and work experiences.

The findings reported by the women indicated that human development through work was a process of mutual endeavor with others, which included psychological and social support found with friends in the workplace. The women expressed shared experiences of workplace constraints and inequities they attributed to gender as well as mutual success in overcoming them. The major themes and challenges that emerged from the interviews included: 1) shared work experience: shared values; 2) friendship development: facing challenges; and 3) formation of a group identity: group action, that all provided insight into the social structure and importance of workplace relationships. The women considered their life course experiences, particularly the sharing of work roles, as those that were unique and not easily understood by people from different occupational groups or by women who had never been employed. The findings indicated that social, personal, and historical experiences shared by those in the workplace are the basis for connectedness and become a foundation for the development of their self-identity and self-esteem. The women reported that workplace friends enabled them to

improvise new roles and reconstruct experiences that provided continuity between past and present. As a result, they developed a new sense of identity that led them into their retirement years. This study offers a unique perspective on work relationships that is based on the suggestion of holistic benefits of workplace friendships across the life span and offers insight as to how other groups of workers may experience benefits of work relationships.

Individualized Value of Work

The relationship between one's family background and work values is another component in understanding the meaning of work. We intuitively recognize the logic that choice of work has a family component, whether it is a family business, an "inherited" skill or talent, or a profession associated by family influence.

In a study examining selection of work, Paine, Deutsch, and Smith (1967) surveyed a cross-section of male college students in Maryland (n = 155) to determine the relationship between work and family values. Work values, including security, associations with fellow workers, helping others, and monetary benefits, were compared with family background factors described as social activities, community activities, religion, culture, material things, and family income.

The findings showed a significant correlation between work values and family background factors ($p < .05$). No particular relationship stood out, however, as being highly correlated, which may indicate that work is influenced by a number of simultaneously interacting factors in the family subculture. Despite the small and narrowly focused sample, the results suggest that work serves a role in family connectedness.

The personalized view placed on the phenomenon of work meaning is intimate and seldom discussed. Yet when asked, people often view their work in terms of a job, a career, or a calling. In a study aimed at the worker's perception of work meaning, Wrzesniewski et al. (1997) sampled college employees (n = 196) using the Work Life Questionnaire. This questionnaire uses a three-paragraph description depicting experiences of a worker in a particular setting categorized as an expression of *job, career,* or *calling*. Work-related behaviors and feelings about work and job satisfaction were measured to identify differences in workers based on whether workers interrupted the meaning of what they did. However, the labels *job*, *career*, and, *calling* were not used in the survey to avoid selection bias. Most respondents were women (79%), with a mean age of 42 years with a range of occupations that included faculty and non-faculty university employees. Almost 40% of the respondents reported an annual income of less than $25,000.

The findings showed that 44 respondents categorized their work as *job*, 43 as *career*, and 48 as *calling*. Responses to the narrative paragraphs of *job* and *calling* were strongly inversely related ($r = -0.52$, $p < .01$), whereas *career* ratings were not correlated with either *calling* or *job*. Those who considered their job a *calling* were significantly better paid, better educated, and had occupations with higher status compared with those who viewed their work as a *job* or *career*. Those who considered their work a *calling* rated their health better, had the lowest number of missed workdays, and reported better life and job satisfaction. A particularly interesting finding occurred when one particular group was analyzed. Twenty-four of the participants were administrative assistants; of those, 9 considered their work a *job*, 7 a *career,* and 8 considered their job a *calling*.

Administrative assistants were homogenous with regard to age, income, and education but had unexpectedly different self-perceived social ratings for their occupation.

A weakness of the study is that the sample was drawn from a group likely to consider their work as altruistic, therefore not representative of workers in general. Nonetheless, the findings are relevant in that they reveal workers' intimate feelings about their daily work and indicate that even work that might be considered routine and unskilled can be deeply meaningful to the individual.

Workers' Compensation System and the Injured Worker: Stigma or Support?

The workers' compensation system is intended to help injured workers, yet evidence shows that its success in doing so is questionable. Based on the study by Morse (1998), found that 90% of WRMSDs were not reported as compensation claims, and those that were recounted sometimes catastrophic personal and economic loss including divorce and loss of home as examples. Keogh (2000) also reported that the effects of work injury linger long after the employee's return to work causing significant functional loss, limiting ADLs in the home environment even more than work activities. Equally discouraging was the study by Pransky (2000) that found a majority of injury symptoms were worse at the end of the workday, and that re-injury is common for those who are able to return to work. The study by Shannon and Lowe (2002), found that 40% of those eligible did not even file a claim for benefits, and those who did were more likely to have the security of a permanent job, rather than a temporary assignment, and have sustained a more serious injury. By contrast, Biddle and Roberts (2001) found that 20% of those not filing gave fear of employer retribution as one reason for their decision. Wage replacement had no effect on duration of injury, and a significant portion of injured

workers incurred out-of-pocket expenses (Cheadle, 1994; Morse, 1998; Keogh, 2000; Pransky, 2000).

However, it is important to note that suffering is not commonly measured as a factor of work-related disability, though there can be no denying that suffering and loss connected to work injuries exists. The workers' compensation system is designed to provide compensation for measurable degrees of disability based on functional loss rather than suffering. The consequences of loss resulting from one's compromised self-identity, family income, family goals, and role are generally considered outside the scope of the workers' compensation system and not compensable.

A consequence of work injury is the fact that all injured workers who report their injury must deal with the workers' compensation system. As part of their comprehensive study reported earlier, involving Florida (n = 204) and Wisconsin (n = 198), workers, Strunin and Boden (2004) asked open-ended questions, allowing injured workers an opportunity to express their opinions about the compensation system. The impact of participating in the workers' compensation system showed two categories of positive responses that described the system: cooperation and caring relations. In addition, the following themes were identified as ways in which the system did not provide support for the workers: 1) adversarial relations—suspicion and disbelief; 2) surveillance; 3) delay and termination of income benefits; 4) the "run around;" 5) not paying for medical benefits; 6) consequences to worker; 7) lack of understanding/control; and 8) overall demeaning experiences.

Some workers who felt a personal connection with the insurance provider reported cooperative and caring relationships. However, many workers described their

relationship with the workers' compensation insurance company and doctors as unpleasant because they were treated with suspicion and made to feel as if they were defrauding the company for the purpose of receiving benefits. More workers reported encountering problems with providers of disability benefits than cooperation. A particularly disturbing situation occurred when the insurance company conducted surveillance of a worker which included hiring investigators to question co-workers and conducting sub-rosa filming of the worker in activities of daily living both at home and in private situations (Strunin & Boden, 2004).

> People were watching me across from my house…I've seen people taking pictures of me when I got out and in my car…it was bad (p.342).

Another disturbing experience involved delay or termination of benefits without communication from the insurance company. Workers felt unable to meet their personal and family obligations because of lack of money and were distressed by promises that were not kept (Strunin & Boden, 2004):

> It was taking so long to get my money, it's like try to explain to these people, you know, I've got three little kids here I need to feed and without money coming in I can't pay my bills. I just don't understand what the hold up was (p. 342).

Florida workers complained about the medical care "because the doctor gets paid by the insurance company and makes people go back to work even if they can't" (Strunin & Boden, 2004, p. 323). They did not believe that the doctor had their medical needs foremost in mind but instead, that their care was heavily influenced by the insurance company. Wisconsin workers who went to private doctors reported that frequently the insurance company refused to pay the doctor. In such cases, workers sought coverage through their general health insurance to continue with treatment. The overall experience

of workers' compensation for these workers was demeaning, humiliating and shameful. They reported neither proper service nor respect (Strunin & Boden, 2004):

> They treat you like you're not human. That's the best way I can put it. I've been jacked around, doing without, begging, and begging, and begging… (p.344).

Respondents reported three aspects of behavior by insurance company personnel that were particularly offensive: 1) suspicion that injured workers were undeserving of covered benefits of the workers' compensation system; 2) tactical behavior intended to delay benefits as a way to discourage worker-selected medical care or to negotiate premature settlement of claims; and 3) delay in benefits and bill payments because payment systems within the company were poorly set up. Mistrust, stigmatization, payment delays, and refusal to pay covered benefits raise the costs associated with workplace injuries. These findings highlight only some of the reasons that underreporting of injury claims may occur (Morse et al., 1998). Strunin and Boden (2004) have further shown that injured workers experience an added form of victimization from their interaction with the workers' compensation system.

Difficulty with recovery and return to work related to the compensation and medical systems also were reported in a study of Canadian workers (Beardwood, Kirsh, & Clark, 2005). This study is especially interesting because of its use of participatory research methodology. Here, injured workers and academics together determined the research questions, gathered interview data, and interpreted results.

The data described stages of involvement with the compensation system such as seeking treatment, fair and adequate recognition and compensation, and return to adequate work. Workers voiced feelings that the workers' compensation claims provider

regarded their claim as fraudulent until proven otherwise. They felt judged by stereotypes held by others, particularly in interactions with doctors, employers, and insurance claims personnel. These negative experiences left them feeling compelled to continually prove themselves worthy of disability benefits. Lack of control over time, lack of medical treatment, and lack of information were cited as causes of disempowerment, helplessness, and victimization. When workers had the legitimacy of their injuries questioned, they felt coerced to undergo tests and treatment, or return to work even when their injuries were unresolved.

The findings were strengthened by the researchers' effort to utilize injured workers' input in design and questions rather than merely being limited to the role of "participants" in the study. However, the extraordinary amount of time required to negotiate the many opinions involved and to manage the different levels of understanding of research practice and analysis can be cumbersome in such work. Nonetheless, this study is important because it corroborates other research that describes workers' experiences with the compensation system (Strunin & Boden, 2004).

Prevalence data are used to inform public policy, yet they fail to describe the degree of suffering caused by injuries or the degree to which social roles of injured workers are changed as a result of their injuries (Keller, 2001). In an ideal world, the cost of care for work-related injuries would be fully covered by the insurance system that receives premium payments for such coverage. Although employer-funded workers' compensation insurance covers much of the cost, several studies show the financial burden also falls on the injured worker (Biddle et al., 1998; Morse et al., 1998). Underreporting of injury claims has been discussed as a source of inaccurate findings

related to costs. A secondary problem with underreporting of work injuries is that many interventions are, therefore, based on study findings that are incomplete or inaccurate.

The purpose of the workers' compensation system is poorly understood by workers, even those who actively receive disability benefits. To reduce the perception of outside basis and stigma associated with claiming benefits, disabled workers reported that they often withdraw from work relationships. Some workers indicate that they have been discouraged by their employer from maintaining contact with co-workers who are on disability, perhaps due to pending litigation. It is unclear why, but the consequences of loss resulting from one's compromised self-identity, family income, family goals, and role are generally considered outside the scope of the worker's compensation system. Perhaps there is a determination that the compensation injured workers receive for their injuries sufficiently covers the extent of their losses, even though research contradicts this assumption (Leigh et al., 2001; Morse et al., 1998; Pransky et al., 2000; Shannon & Lowe, 2002). Therefore, while several major studies provide an introduction to various categories of loss in worker populations (Keogh et al., 2000; Morse et al., 1998; Pransky et al., 2000), when viewed alone, they fall short of providing a complete understanding of the experience of suffering related to loss. Occupational health research that can determine functional and economic loss (Keogh et al., 2000; Leigh et al., 2004; Morse et al., 1998; Pransky et al., 2000) as well as the individual's experiences and perceptions of being a disabled worker (Strunin & Boden, 2004; Sum & Frank, 2001) both contribute to reducing the negative consequences of work injuries.

Being a Disabled Person

Studies that were reviewed specific to disability that was related to workers' compensation fall short of a full description of what it is like to become disabled in the eye of oneself and others. Therefore, the review of literature concludes with a review of three studies that describe acquired disability not related to work-place injury. These studies help fully describe the phenomenon and the individual's experience of disability.

Surprisingly, occupational health commonly associated with disabilities that affect major areas of life seldom address issues of bereavement or grief. Even when findings describe catastrophic loss associated with work injury, occupational health researchers seem reticent to use such terms, perhaps because they are difficult to measure. Nonetheless, research outside of this area exists that assesses issues related to the experience of being a disabled person. Perhaps the most frequently quoted body of work in the area of loss related to acquired disability is work conducted by sociologist Kathy Charmaz (1983). Charmaz's research is distinguished here for reasons associated with her use of grounded theory methodology to develop broad and deep descriptions of loss associated with chronic illness and disability. Her study published in 1983 remains a hallmark of disability research still today. It was comprised of 73 interviews with 57 chronically ill people who were 20 to 86 years of age. This scope is considerably larger than many qualitative studies.

Charmaz used components of traditional grounded theory along with interpretive reflections characteristic of phenomenology in the analysis of the personal accounts of disability. The study findings are based on data obtained from those with chronic illness, their family members, and health care professionals. Data analysis revealed themes of

loss and suffering, as experiences associated with chronic illness, to be focused in four areas:

1. Living restricted lives: independent versus dependent, mobile versus immobile
2. Experience of social isolation: lack of work coupled with illness results in lack of friendships
3. Being discredited: unmet expectations of others privately and publicly
4. Burdening others: loss of hope for any optimistic future, uselessness

The participants described a new awareness of how society emphasizes *doing* rather than *being*. The study also showed how people with chronic illness lose the *known self*, which then leads to concern about the *self* they see themselves *becoming*. Of particular interest here is the finding that social isolation was enhanced by the loss of relationships when disability resulted in job loss, regardless of the type of disability. The themes derived from the interviews are similar to measures found in other work disability (Cheadle et al., 1994; Keogh et al., 2000; Morse et al., 1998) and job loss studies, (Brodsky, 1977; Morris & Beal, 1985; Keefe, 2001) that depict difficult social adjustment and suffering.

One of strengths of this study is the step-by-step guide to the method of analysis allowing auditability. The findings are not only important to the disability literature, but they have correlated with subsequent work by Strunin and Boden (2004) and address similar themes identified in the four major occupational health disability studies discussed here (Cheadle et al., 1994; Keogh et al, 2004; Morse et al., 1998; Pransky et al., 2000). A weakness of the study is the presentation of the data where the author's style of

using multiple long-dense narratives made it difficult to readily identify the full impact of the findings.

Stigma of Disability

Being disabled is often accompanied by labels. The label of being disabled often is rejected by those with functional loss, making it difficult to study the phenomenon because of a gap in language or an outright rejection of the label (Pfeiffer, 1999b; Zola, 1993). In a study using narrative methods to identify how disabled participants construct meaning from their life-changing event, Gordon (1998) interviewed 40 women, intentionally selecting them from different age and ethnic groups. The women volunteers were eligible to participate if they had been diagnosed for at least 1 year with one of four chronic illnesses: multiple sclerosis, rheumatoid arthritis, osteoporosis, or lupus. The interview included questions such as: “Do you think of yourself as a person with a disability?”; “How would you rate your physical well being?”; “What were your thoughts about people with disabilities before you were diagnosed?”; and additional questions that provided an opportunity for individual disclosure of perceptions.

The findings reflected the participant’s personal meaning of their own illness as value laden and emotionally charged. An example was one participant’s strong reaction to the label of *disabled*. Most of the women (60%) reported that they did not consider themselves disabled, despite their rather severe physical and career limitations. The women did not feel they “deserved” any special treatment such as rest periods or reduced social obligations because of their physical condition. They reported an aversion to using handicaped parking privileges because of the public recognition of disability, which they actively avoided. If their disability was not readily apparent, they felt the need to justify

the fact that they were indeed disabled based on a feeling of judgment from others. Furthermore, comments made by participants about their decision not to disclose their disability to others revealed the stigma they felt while collecting compensation benefits.

These very important findings provide context to the meaning of having a progressive disability. The study findings are strengthened by the rigorous analysis and the rich narrative that allowed meaning to emerge from the participant's responses.

Sources of stigma and judgment can be found among relationships within the work setting, which makes working with invisible or hidden disabilities difficult. For example, workers who experienced occupational hearing loss reported reluctance to disclose their disability to coworkers because of negative stereotypes. This was problematic and ultimately led to social withdrawal and isolation in the workplace (Hetu et al., 1994).

Exploring occupational injury research revealed a limited number of qualitative studies that allowed the individual's ideas and experiences to surface. More commonly found were quantitative studies that summarized the experiences of injured workers by worker characteristics, job type, type of injury, and those that detailed the economic consequences of workplace injuries (Cheadle et al., 1994; Keogh et al., 2000; Morse et al., 1998; Pransky et al., 2000).

Alternatively, qualitative researchers capture the disabled person's experience in narrative form, using semi-structured, open-ended questions to portray the lived experience of "becoming and being" disabled in the world (Charmaz, 1983; Freedman, 1996; Nosek, Hughes, Swedlund, Taylor, & Swank, 2003; Strunin & Boden, 2004; Zola, 1993). Both methods are compelling and useful in different ways. Together, the two

sources complement each other, delivering a more complete picture of the disabled person's experience to the attention of health professionals, policy makers, researchers, and the public.

Theoretical Framework: Symbolic Interactionism

The following section will set forth the theoretical framework of symbolic interactionism (SI) used in this study. In addition, by using the principle constructs of SI as acquired meaning, an understanding of how injured workers may be influenced to take on new meaning as identity following disability will be explored.

Background of SI

Theory is used to understand a phenomenon by setting forth assumptions and conditions as its framework. Because symbolic interaction provides a theoretical understanding of how individuals and groups interact with others to form meaning of events that result in the creation and recreation of one's personal identity, it is well suited to study the phenomenon of workplace injuries. As a social theory, SI is particularly useful in examining social events, such as to what degree a change in work status because of injury impacts the individual's role identity and subsequent actions. Since the early 1900s, workers' compensation has been the system that provides benefits to those with work-related injuries. As such, injured workers must interact with the "system." The compensation system governed by laws and regulations requires certain actions of the injured worker, who then becomes dependent on interactions of others to receive benefits. Using the framework of SI, dependency then becomes an event in addition to the injury that acts to recreate self-identity.

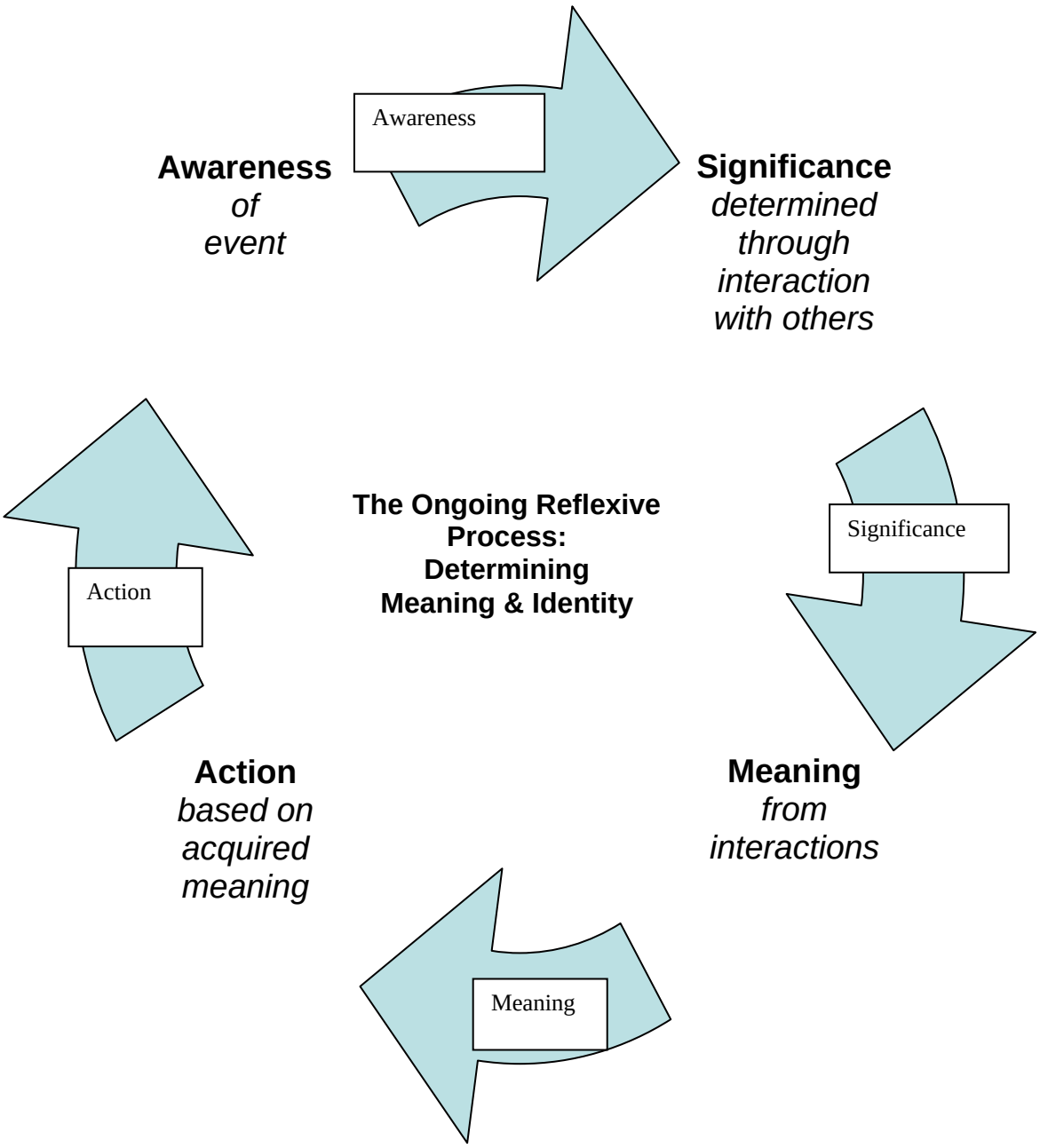
As the social sciences became recognized within a climate dominated by experimental science during the 1920s and 1930s, SI moved from its biological roots and influences of Charles Darwin toward a theory of importance in understanding behavior and meaning that resulted from social interactions in families and work (White & Klein, 2002). Philosopher George Herbert Mead (1863-1931) is credited with the inspiration for the symbolic interactionist school of thought (Boss, Doherty et al., 1993). Mead remains the founder of social interactionism largely because of Charles Morris, who compiled and edited the notes of his students, published as *Mind, Self and Society* in 1934 (White & Klein, 2002). Mead's theory differed with other scholars of his day who regarded the self as an organized body of needs or motives identified as the ego. Whereas, for Mead, *the self* was the result of a process of conversations and gestures that become internalized (Mead, 1934). He described it as a *reflexive process*, meaning it did not occur as a solitary event but rather as a result of interaction with others (Figure 1). Unlike psychological or personality theory, Mead distinguished the ego as self only as a consequence of the reflexive process. The reflexive process begins when an individual becomes aware of an event and continues while the individual determines significance, which occurs through interactions with others. The process concludes when the individual takes action relative to the acquired meaning from the completed process (Blumer, 1969).

Of those who studied under Mead, perhaps the most important contributor to the development of SI as a major social theory was Herbert Blumer, a student of Mead at the University of Chicago. Blumer, a sociologist credited with the phrase "symbolic interactionism," defined the core principles of SI as *language*, *meaning*, and *thought*.

Meaning Derived from Interaction with Others

The interpretive process of knowing constitutes meaning to the individual. A key point in applying the framework of SI, as a way of understanding meaning held by the injured nurse, is to understand the often unconscious existence of the reflexive process in determining meaning in an event and how that meaning influences feelings and behavior (Figure 1). For example, an injured nurse who can no longer perform heavy work is permanently restricted from doing bedside nursing. The consequence of such a loss is influenced by the meaning of the individual of the role as *nurse*. The process generates new meaning that is acquired based on interactions with others, including family and co-workers, the compensation system, and medical providers. Their view of the role change ultimately influences the nurse's self-identity and future plans (i.e., their response to the change in the person, as an individual, becomes a reflexive process that influences future action of the nurse). As indicated previously, the workers' compensation system is a separate and distinct entity, which can impart meaning that can inhibit or contribute to the nurse's plan of returning return to work after injury.

Figure 1. Symbolic Interactionism Process of Determining Meaning & Identity (Blummer, 1969)



Put succinctly, SI theory holds that subjective meaning is socially constructed and leads to the creation of *self*. Symbolic interactionism is based on three simple premises that provide its foundation for understanding the interaction of behavior and meaning: 1) people act on the basis of meaning things have for them, 2) meaning is derived from the social process of interaction with others, and 3) the meaning of an event or object can change over time because of intervening circumstances and interactions that create new meaning (Blumer, 1969).

How Language Imparts Meaning

As a communicative process, SI involves both language and behavior related to an experienced event. The communicative process is holistic in that it involves the whole being, including physical, emotional, and mental elements. It is both verbal and nonverbal. The event focused on in this study has two parts: 1) the nurse's perception of engaging in the workers' compensation system, and 2) how the experience of a work injury influences the *role* of the hospital nurse. To an outside observer, these entities may appear to be two events and should be examined separately. However, for the injured worker, they cannot be separated; one is not experienced without the other. Because both events occur simultaneously, their meaning as a creation of *self* is intertwined.

Communication can be words spoken, read, or thought, and includes non-verbal, facial, or body expressions—all of which symbolize reflected meaning. Therefore, a key premise of SI is the importance of particular language in determining meaning. When interactions occur, language ascribes meaning of the experience of being a disabled person to the individual. As an expression of *self* by others, language categorizes those

who are considered to be disabled from those who are not (Freedman, 1996; Headley, 1989; Zola, 1993).

Workers' Compensation and the Injured Worker in California

The system of compensation for injured workers is in a constant evolutionary process influenced by public opinion, personal values, legislative rhetoric, and litigation. In the center of the delivery of benefits is the injured worker. In addition to the messages imparted by the systems claim forms, which have been discussed, the functional aspects of receiving care are equally confusing. For example, the process of *utilization review* is experienced by injured workers as one of the more frustrating parts of the 2004 legislative reforms. This process disrupts the flow of medical care by giving insurance persons, or others they hire as consultants, the responsibility to deny treatment, including physical therapy, surgery, medication, or diagnostic tests, if the provider fails to supply evidence-based support for it based on the American College of Occupational Medicine (ACOM) guidelines. Because the utilization review process is retroactive, it affects all cases, including those with court-approved settlement awarded before 2004.

In California, the language of the law articulating the workers' compensation system is found in the California Labor Code and in the Administrative Rules and Regulations. As legal documents created by legislative rulings, none are easily understood by the lay public. Instead, distribution of information intended for public use, including potential injured workers, is prepared and distributed by the California Department of Industrial Relations (DIR), and the Department of Workers' Compensation (DWC). Employers have the burden of being aware of the laws governing

their conduct, including their obligation to provide state mandated notices to employees, almost all of which are located online. (DWC, 2005).

Workers' compensation has five major forms of benefits that have been enacted and modified by the state legislature. Entitlement to these benefits is based on legitimacy of the injured worker's claim. Covered benefits under California workers' compensation include (Ball, 2003, p. 3):

1. Medical treatment that is reasonably required to cure or relieve the effects of the injury or illness.
2. Indemnity payments up to two thirds of the injured workers weekly wage at the time of the injury, which has a statutory maximum and minimum cap.
3. Job Displacement Voucher established in the 2004 reforms, which repealed vocational rehabilitation benefits enacted in 1973.
4. Permanent disability, compensation for permanent functional loss.
5. Death benefits paid to the dependents of the deceased worker's family.

Initial action to access these benefits is incumbent on the injured worker who must file a claim form. The single page claim form comes with two pages of instructions and is provided by the employer upon the request of the injured worker. After the necessary forms are submitted, the injured worker is referred to an employer appointed doctor. Thereafter, entitlement to any or all compensation benefits described earlier rests with the physician who practices in compliance with the laws that govern the workers' compensation system, after receiving authorization from the insurance carrier. Therefore, it is the role of the physician to determine whether a worker's injury is valid and compensable based on the

nature of work and the type of injury. Further, all medical treatment must be pre-authorized by an insurance claims person. As an example, the legislative reforms of 2004 have made it commonplace for insurance personnel to deny medical treatment, including diagnostic tests, when the treating physician's request does not meet the strict guidelines of evidence-based practice standards. The role of the insurance carrier is to evaluate and authorize what is considered appropriate treatment and to pay indemnity benefits in good faith as required by law (Ball, 2003).

Although there are many government-mandated forms and documents in the workers' compensation system, the two intended to provide early information to injured workers about covered benefits are of particular interest here. The DWC-1 *Workers' Compensation Claim Form* is provided to injured workers by the employer, and the DIRs *Rights to Workers' Compensation Benefits and How to Obtain Them,* is a source intended to instruct injured workers in obtaining benefits. Each of the two documents contains a warning in boldface text as follows:

> **A person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers' compensation benefits or payments is guilty of a felony (DWC, 2005).**

Written language in the form explains the description of medical benefits. One of the five covered workers' compensation benefits to injured workers, which is an issue of significant concern to them, reads as follows: "Paid by your employer, to help you recover from an injury or illness caused by work. You should never receive a medical bill." (DWC, 2005). It is clearly stated that once injured, there will be no medical coverage worries, so the injured worker is to set aside concerns about coverage and focus

on getting well. The information given to the injured worker in the DWC-1 claim form provides a slightly different but similar view of what to expect in terms of medical coverage. The implied message to the injured worker is to take a passive role in the management of his care because someone else is in charge of decisionmaking:

> Your claims administrator will pay all reasonable and necessary medical care for your work injury or illness. Medical benefits may include treatment by a doctor, hospital services, physical therapy, lab tests, X-rays, and medicines. Your claims administrator will pay the costs directly so you should never see a bill. For injuries occurring on or after 1/1/04, there is a limit on some medical services (DWC, 2005).

The overall message is that an array of reasonable care will be provided and the worker should never see a bill. Although vaguely stated, the claims administrator, an intermediary between the injured worker and the physician, usurps control by determining reasonable and necessary medical care.

Benefits provided within the workers' compensation system are public as is the injured workers' medical record, which comes as a surprise to many injured workers. Also surprising is the fact that the injured worker may be compelled to abide by medical opinions other than the treating physician, even if such opinions contradict the opinion of their long-time treating medical provider.

A worker who reports a work-related injury makes his or her experience a public event in which others are involved in defining, managing, and treating the person. Serious injuries and disability are life-changing events. But as seen in the literature, very often injuries are not reported, yet they too can result in significant meaning and disruption to the individual, their family, and a work climate where co-worker support is key to doing the work. Mead saw the process of interaction between the *self* and the life world or society as one that is dynamic, changing with new information and events. Referring

again to the example of the injured bedside nurse, it is the reflexive process involving social integration, legitimacy of the claim for benefits, and acceptance of role change, that results in an acceptable self-identity as an injured nurse. On the other hand, treatment with suspicion, lack of trustworthiness, and disregard, may explain meaning that compromises a nurse's revised identity and self-worth.

Influences on Meaning Development

Understanding meaning requires awareness of the cultural definition embedded in our common language. An example is found in a Merriam-Webster's Dictionary (2001, p. 376) that defines disability as "a physical or mental handicap, especially one that prevents a person from living a normal life or from holding a specific job." Potentially, a lifetime of research could be devoted to defining a *normal life* and how the lack thereof would result in being labeled as *disabled* or why not holding a specific job would define one as being disabled. Clearly, the language of disability is fraught with emotional undertones that imply meaning. The definition found here depicts one who is disabled as being held back from being normal. Acquired disability is sometimes described as learned helplessness, which could be viewed as proactively accepting a life role as one that is less than normal (Abramson, Seligman, & Teasdale, 1978).

Having provided a definition for disability, Merriam-Webster's (2001, p. 1113) defines rehabilitation as "to restore or bring to a condition of good health, ability to work or productive activity." Considered together, disability and rehabilitation seem to contradict each other. That is, if one is disabled (i.e., "prevented from having a normal life"), then is it possible for one to then be "restored" to health, work, or productivity? And if so, how is being restored defined? Regardless of their intended function these

labels are negative and imply a hierarchy of being in the world that is described by injured workers in terms that reflect a feeling of being stigmatized and disenfranchised (Strunin & Boden, 2004; Susman, 1994).

In general, language used to describe disability reflects an interruption in one's life course, like a derailed train. A person is described as *being disabled* or *becoming disabled* to indicate that being disabled is a departure from what is expected or normal. One does not intend to be disabled. In fact, we regularly hear inanimate objects such as vehicles in commute traffic referred to as being *broken down* or *disabled.* Such objects are disruptive to the rest of us, and we want them out of our way. Few would argue that disabled vehicles are indeed a hindrance or obstacle, even a public hazard. But remarkably without giving it much thought, the same language is used to describe a person who with an acquired a disability, even though they most certainly also had labels such as breadwinner, independent, dependable, highly skilled, and may have been competitively employed before their injury.

As implied in the dictionary definition, disability is not the *normal* or *expected* course in development of the self. Nonetheless, people with disabilities are common in our society, so much so that laws have been enacted to provide them services intended to enhance the quality of their life, and protect their rights (Ball, 2003; Freedman, 1996; Guzik, 1999; Strunin & Boden, 2004). Paradoxically, the act of creating such protections requires that language be created by society to define those with disabilities to entitle them to the benefits. In so doing, entitlement becomes a mechanism for separating the disabled person from others and is frequently credited with creating the stigma associated with having a disability.

In addition to research on disability, the experience of stigma related to disability is perhaps most eloquently described in narratives from authors who themselves are disabled (Nosek et al., 2003; Pfeiffer, 1998, 1999a, 1999b). Rather than attempting to quantify that which cannot be measured, the disabled person is best able to articulate the essence of being a disabled person in daily life. SI theory provides a way of understanding the factors of disability that include the reflexive process of incorporating cultural beliefs and bias outside the control of the injured worker into meaning *of* the individual (Taylor, 2004; Nosek et al., 2003; Phillips, 1985).

Contextual Meaning of the Injury Experience

Interpersonal Influences on the Self

Meaning encompasses the individual's perception of the self within the context of the social world, which, as discussed here, includes work, injury, and workers' compensation. In one's social world, the development of meaning is affected by the cultural context of an event. The two cannot be separated. It is, in fact, only through contextualization of the interpretive process of an event that practical meaning is derived (Denzin & Lincoln, 2000).

The perception of *self* within this social world influences one's ability to accomplish future goals, maintain interpersonal relationships, and sustain competence and power (Fife, 1994). Fife provides understanding into the convergence of context and the interpretive process by describing the construct of meaning as having two fundamental dimensions: 1) *self meaning*—that which pertains to one's own identity, and 2) *contextual meaning*—that which pertains to the characteristics of the event itself and

all the events that surround it. It is the linking of these two dimensions of meaning that distinguishes SI from other philosophical and psychological conceptualizations.

Because work disability occurs individually but is experienced in a social context, the reflexive process of SI provides the optimum framework for understanding the role of the workers' compensation system. Relationships between the individual and his world develop within the context of the injury event and setting. For an injured worker, meaning is derived from the reactions of others particularly those perceived to have power and influence over the worker, such as medical providers, insurance personnel, and supervisors. Interaction with these groups becomes intertwined with the workers' own reflection of the event, which then contributes to one's reconstituted meaning of self.

Although meaning exists within life experiences, it is understood in the context of the interactive responses to those experiences, and expressed as language, action, or behavior. Behavior in the context of a social world is modified by perceptions and reactions that come from daily experiences (Blumer, 1969). As such, a person is always interacting with the *self*, others, or his or her environment, thereby developing new meaning, allowing the individual *self* to evolve as a product of a dynamic and interactive process (de Klerk & Ampousah, 2003).

Individuals make value-based distinctions among external influences that result in a varying degree of importance assigned to a particular influence. In a study exploring the experience of disabled women, it was found that, although most adults generally seek social feedback regarding self-worth from their peers, this was not the case for those with disabilities. Instead, the disabled women sought feedback from significant and generalized others in their life world. In doing so, the women compared themselves to

those without disabilities which had a negative influence on their relationships with others and was contrary to maximizing their own self-image (de Klerk & Ampousah, 2003). The cost of their tendency to compare themselves to a non-disabled reference group, rather than to their peer group, was reflected by their own lack of self-acceptance.

Not all interactions, messages or perceptions are held with equal importance by the individual. One of the premises of SI is that meaning is influenced by one's individual view of the event. Therefore, meaning of interactions and events differ, depending on the degree of importance given them by the individual. Sources considered powerful or authoritative by the individual, such as those who have the power to provide benefits, or restrict work activity, have the greatest influence of meaning to the injured self (Blumer, 1969).

When an injured worker seeks disability benefits, he or she is vulnerable to the influence of his employer, physicians, insurance adjustors, and the legal parameters of the compensation system. Yet, the injured worker seldom has a history of experiences to draw upon to provide contextual meaning of self-independent of such outside influence. In other words, the significance of the event to the injured worker is generally heavily weighed in favor of meaning ascribed by others rather than the worker's sense of *self*. Again, the reflexive process ascribed to SI encompasses cultural beliefs and bias outside the injured worker and an explanation of acquiring meaning of the individual *self* (Taylor, 2004; Phillips, 1985, Nosek et al., 2003).

Hospital as Place

The hospital setting is where the nurses in this study spend their work time. Since the first hospital was established in Philadelphia, PA, rooted in religious-based Quaker

values in 1751 (Hospital, 2007), hospitals have had a long tradition of service and caring for others. Since then, hospitals have become large, complex providers of health care to the acute and chronically ill where biotechnology and humanistic care struggle to coexist. The climate of the hospital setting is further influenced by its for-profit or non-profit philosophies as business institutions. Nonetheless, hospitals are demanding work settings in many ways, including the 24/7 schedule for staff, primarily nurses, who are expected to attend to the emotional and physical demands of ill and dying patients and families. The type of environment and the shared mission of caring for others likely contribute to the staff's dependence on each other to complete their assignments and the support and camaraderie many nurses share. Although nurses work together on hospital units, not enough is known about how their co-worker relationships influence their work satisfaction or productivity.

Although nurses are the largest single group of hospital workers, there are insufficient numbers to meet the demands of the current marketplace. Regardless of injury and disability rates, it is widely reported that the nursing shortage is expected to worsen in the United States (AACN, 2007), which will compound an already dire lack of skilled hospital nurses. A familiar characteristic of work performed by hospital nurses is the close working relationship nurses have with other nurses. Nurses share a common identity that includes a high level of public esteem. Particularly, in the hospital setting they are frequently interdependent on other nurses on the team to fulfill the rigorous demands of their job. This study will delve into nurse identity along with their world of hospital work and injury to explore how they intersect to form meaning and influence the nurse's behavior.

An understanding of the impact of the workplace on the injured nurse's experience includes individual and collective influences of the work climate, including co-worker relationships and attitudes. Workers report co-worker interactions and attitudes as important influences on their perception of wellbeing in the workplace (Dugdill, 2000). Effects of co-workers on perceived worker health is not commonly found in occupational research and therefore offers a new and useful perspective to the field. In addition, co-worker support can be a major influence on the employee's return to work (Gheldof et al., 2005; Liukkonen, Virtanen, Kivimaki, Pentti, & Vahtera, 2004; Post, Krol, & Groothoff, 2005).

Work Meaning

Observing the attributes of workplace relationships can offer insight into what is lost when work is interrupted (Dugdill, 2000). In addition, work relationships affect one's quality of life beyond the work setting itself. They serve as a source of social development and identity throughout the stages of one's life and contribute to an enriched retirement after work (Francis, 1990). Francis (1990) found that relationships formed in the workplace provided psychological and social support through shared experiences. Workers who developed such relationships experienced their connectedness as a foundation for the development of self-identity and self-esteem throughout the lifecycle.

One's perception of the *meaning of work* may seem obvious and predictable, particularly among those in service or helping professions (Apker et al., 2003). However, when a cross-section of workers was asked to describe their work as either a *job*, *career* or *calling*, surprisingly a group of administrative assistants who worked in higher education described their work as a *calling* (Wrzesniewski, McCauley, Rozin, &

Schwartz, 1997). The administrative workers saw their work as providing a service to students. They perceived their role as one that helped young students overcome obstacles that impaired their educational goals, which gave it more meaning that just a job. This indicates that the meaning of work to the individual is based on something internal in the worker that is manifested as the individual's view of *self*. It also illustrates that the individual worker's perception related to the work they do is not self-evident, but it must be probed to determine the meaning of importance held.

Work Climate That Includes Wounded Workers

Although most injuries do not result in any lost time from work, even those who take time off return to work within 1 month (Cheadle et al., 1994; Morse et al., 1998). To maintain their work, injured workers succumb to the effects of their disability at home, revealing personal and family consequences often hidden from co-workers and employers. Yet the existence of the influence of an impaired home life because of a work injury carries both a physical and emotional burden on the worker, especially in the hospital nurse's work climate where 12-hour shifts, high patient demands, and staff shortages are common (Trinkoff, 2006). Injured workers in the work place represent not only the obvious concerns for the wounded worker, but they contribute to an environment where workers are not able to fully contribute to the health of their workplace because they are not healthy themselves.

Research indicates that work injuries are seldom fully resolved when the worker returns to work (Gillen, Jewell, Faucett, & Yelin, 2004). In fact, the majority of workers who returned to work reported difficulty performing their job even though they had been released to full duty. The consequence of this in the hospital setting affects not only the

level of work preformed by the injured nurse, but when nurses lack the ability to assist co-workers, it influences the quality of work climate itself. In addition, many workers who returned to work had difficulty doing simple ADLs in their personal lives (Keogh et al., 2000). Functional impairment both at work and home result in social and economic costs for the injured worker and his family, and respondents not surprisingly report depression following work injury. Although some workers, including union members and those who are highly educated, are more likely to keep their same job after injury, little is known about the nurse's transition back to work or their ability to maintain work (Morse et al., 1998).

Re-injury was common for workers who worked after injury regardless of time off to recover. Pransky et al. (2000) found that although 61% of workers had gone back to work with the same employer they had when the injury occurred, and 86% of them to the same job, the workers did not feel they had been given any instructions about prevention from re-injury from their medical professional (Pransky et al., 2000). In a climate where several workers have been injured, fear of injury exists even without having experienced a significant injury oneself. Another factor that influences recovery and re-injury is aging, which, in hospital nurses, is a human resource concern because the average age of hospital nurses is 47 years (HRSA, 2007).

The perception of an injured nurse's value of *self* compared with the needs of the hospital is not understood. However, when Tarasuk et al. (1995) interviewed injured workers, they found workers who rationalized their supervisor's conduct with the understanding that even if his or her supervisor cared about him or her personally, the employer would be more concerned about an increase in insurance premiums. Injured

workers struggled to accept the employer's duty for the "greater good" while minimizing their own needs. The worker's view reflects the perception of a shift of their own self-meaning from *contributing* employee to *costly* employee. The shift reflects a change is the meaning of *self,* which affects behaviors, beliefs, and actions that impact recovery and rehabilitation as a productive worker.

Summary

This body of literature suggests that the lack of a full and accurate understanding about the totality of the disability experience at a personal, social, and economic level by the injured worker prevents others from fully understanding the experience. Distance then serves as a way of keeping disability and those with it separate, and it also allows myths about disability to perpetuate causing a cycle of de-legitimatization.

The exploration of research describing the impact of work injury uncovered two general types of studies: qualitative studies that allowed an individual's words and experiences to surface, and quantitative methods that categorized the experiences of large samples. When comparing study findings, much overlap is seen despite their methodological differences. Quantitative methods that evaluated large bodies of data on worker characteristics, job types, and types of injuries delineated the personal and economic consequences of work place injuries (Cheadle et al., 1994; Keogh et al., 2000; Morse et al., 1998; Pransky et al., 2000). Alternatively, by using statistical analyses of claims filed, researchers translated the impact of acquired disability into numbers that translate into dollars (Leigh, 2004).

These studies are not only supported but enhanced by research that captured the disabled person's experience in narrative form, using semi-structured, open-ended

questions to portray the lived experience of *becoming* and *being* disabled in the world (Charmaz, 1983; Freedman, 1996; Nosek et al., 2003; Strunin & Boden, 2004; Zola, 1993).

Both methods yield results that are compelling and useful in different ways. Together, they deliver a more complete picture of the disabled person's experience to providers, policy makers, and researchers. This is exemplified by a comparison of two studies: the Keogh (2000) study of Maryland workers with UECTS and the Strunin and Boden study (2004) of injured workers who experienced the workers' compensation systems in Wisconsin and Florida. Fifty percent of the Maryland workers were disabled because of upper extremity injuries and reported "family problems." A high proportion of these respondents showed symptoms of clinical depression, even though most respondents acknowledged receiving disability benefits including wage supplements. These findings illustrate the serious consequences that functional impairment has on the day-to-day lives of workers and their families that extend beyond those that are merely economic. Respondents confirmed that receipt of workers' compensation payments failed to mitigate the financial damages accompanying acquired disability. The social and personal impact of work injuries reported by Keogh (2000) are supported by other studies (Cheadle et al., 1994; Morse et al., 1998; Pransky et al., 2000). However, because of the methods used, the authors could not fully explain why workers with reported injuries who received benefits continued to suffer.

When suffering following a job injury is viewed through the work of Strunin and Boden (2004), the phenomenon becomes vivid with participant's accounts that reflect demoralized, helpless, victimized persons expressing the extreme personal and social

consequences that injured workers experience. Repeatedly, significant long-term adverse physical, economic, and psychological consequences of work-related injuries are reported in these studies, including significant financial problems residual effects restricting them from activities of daily living, anxiety and pain at the end of their workday and re-injury following return to work (Pransky et al., 2000).

Despite astonishing evidence that only 40% of eligible injured workers in Canada reported injuries (Shannon & Lowe, 2002), and only 11% of workers in a Connecticut study with documented WRMSDs claimed benefits (Morse et al., 1998), the myth persists that work-related injury claims tend to be fraudulent and suspect (Strunin & Boden, 2004). This is an entirely unsupported misconception when one considers that some respondents have reported paying nearly $500 out of their own pocket for medical coverage to treat work injuries (Cheadle et al., 1994; Morse et al., 1998). In addition, these workers reported much higher levels of difficulty with ADLs and childcare. Workers tended not to disclose their disability to coworkers and employers, even when doing so would have helped them with accommodations (Gordon, 1998). In fact, evidence shows that workers with a disability were tenacious about holding on to their jobs even when faced with the challenges of adjusting to life as a disabled person. Nonetheless, workers with disabilities were four times more likely to be fired from work compared with healthy workers (Magee, 2004).

This disclosure of intimate personal details describing the experience of disability suggests that being a disabled person transcends the context of environment or circumstance (Boden & Galizzi, 1999; Strunin & Boden, 2004). Qualitative research supplements the existing quantitative studies by adding a depth of knowledge pertinent to

the experience of the injured worker, allowing the disabled person an opportunity to articulate the full meaning and impact of disability in his or her own words. When a worker becomes disabled, there is both a social and an economic loss to the individual and society. Therefore, both would benefit by finding ways to reduce the level of disability for the injured worker (Keogh et al., 2000; Leigh et al., 2001; Morse et al., 1998; Pransky et al., 2000).

Developing an awareness of the disabled individual's role in the family and community is necessary to expand existing research that encompasses the full impact of disability and job interruption. Results of such expanded research could highlight the experience of disability as a continuum of being a person rather than an endpoint (Charmaz, 1983; Newman, 1999; Nosek et al., 2003; Taylor, 2004). This way of thinking may expand the humanistic view of the work and improve care for the individual. In addition, a shift in thinking about the disabled worker ultimately offers an opportunity to reduce economic loss for employers and society as a whole by revealing ways that re-assimilate the worker (Pfeiffer, 1999b; Strunin & Boden, 2004; Zola, 1993). We fall short of identifying ways to address the personal, social, and economic loss following work disability without understanding the individual's identity that comes from being a fit worker. This is exemplified in the studies of the unemployed (Beale & Nethercott, 1985; Eales, 1988; Joelson & Wahlquist, 1987).

The loss of one's professional identity should not be underestimated as a measure of the loss of *self*. Administrative assistants who viewed their work as a "calling" provide vivid examples of the self-meaning ascribed to one's work (Wrzesniewski et al., 1997) , as did a group of women who worked together over a 40-year period who credited their

work relationships as essential to their social identity (Francis, 1990). Family influences on role have strong links to work identity and work attitudes (Paine, Deutsch, & Smith, 1967). Small children within their families and in school are commonly asked, “What are you going to *be* when you grow up?" The reflexive process of acquiring self-meaning begins to define the young *self*. In grade school, children begin to explore occupational ideas, and, by high school, students are expected to make more serious plans for vocational study or college as they select ways of framing their adult identity within the world of work.

The symbolism and meaning of social and work roles are shaped by the reflection of important experiences with others that have meaning to the individual (Francis, 1990; Paine et al., 1967; Wrzesniewski et al., 1997). We acquire roles within the context of work and family, but we seldom are conscious of how these roles constitute meaning to us personally. Workers determine meaning, in part, by using society's definition of values placed on types of work, job title, level of training and education, and income level. This meaning is translated through the experiences of the worker who becomes disabled, which, in turn, imparts a transformed meaning of value to the person (Nosek et al., 2003; Phillips, 1990; Taylor, 2004). We each view work through our own social lens and derive value and meaning of ourselves in part by the work we do. Work based on our own fit, and that of our family and culture, is one factor in defining our sense of *self*. This fit is jeopardized when disability threatens one’s ability to work (Nochi, 1998; Nosek et al., 2003; Paine et al., 1967; Phillips, 1990).

An equally important loss that occurs when meaningful work is disrupted results in changes in one’s relationships with co-workers (Francis, 1990). It can be especially

difficult for some workers to build new bonds with co-workers when work is lost, particularly those whose work relationships are based on competition and skill level (Joelson & Wahlquist, 1987). Full-time workers may spend more of their time with co-workers than with family members. In a study aimed at gaining a holistic understanding of the workplace, workers described co-worker's personalities as a factor in their own job satisfaction, which was a significant influence on their own health (Dugdill, 2000).

Work relationships often are long lasting and many times are a source of great personal wellbeing as well as professional growth. A work-related injury that interferes with one's ability to do the job, whether based on fear of re-injury or actual impairment in function, affects the role established between the worker and co-worker, just as it does between the worker within the family (Gillies, 1988). Such an event can arrest a longstanding image of *self* and leave the disabled worker with an unrecoverable loss, disconnected from *self* and others. Therefore, there is much to be gained from an effort to hear the voice of the disabled worker and recognize the *new self* that emerges after injury (Charmaz, 1983; Nosek et al., 2003). By doing so, we are offered an opportunity to begin a dialog that will benefit all whom are engaged in the exchange because, by recognizing the worth of another, we recognize a connection within ourselves.

CHAPTER THREE: METHODOLOGY

Introduction to Grounded Theory

The preceding chapter identified a range of outcomes found in existing occupational injury research. Likewise, findings from social research described the disability experience; however, the existing research falls short of integrating the consequences of the work injury with the personal experiences. This chapter will focus on the methodological design used to study a select group of hospital nurses, with the purpose of allowing a range of personal, social, and work experiences by nurses to be explored. This will narrow the gap in knowledge identified in the occupational health literature about work disability.

Because the research aims to capture a range of contextual meaning acquired from experiences, interactions, and beliefs that may serve to motivate or inhibit hospital nurses to work after their injury, grounded theory methodology, with its thematic analysis of the narrative, was used for this study. In the remaining pages, a theoretical framework for how meaning is acquired by individuals, along with the salient features of grounded theory, including data collection, sampling, integration, and verification, come together as the analytical process is explained. In addition, the study design will be presented and the interview guide will be included as an appendix.

Grounded Theory Background

Selection of a specific research methodology is heavily influenced by the research question. The goal of scientific research is to understand and *fully* explain an event, occurrence, process, or result; as such, there is no *best way* to study a phenomenon. A review of the literature showed a range of occupational health topics that have been

studied using both quantitative and qualitative methods. Generally qualitative research describes the social context of an experience from one's individual reality, while quantitative methods emphasize the measurement and analysis of the relationships between cause-and-effect variables (Denzin & Lincoln, 2000) .

Ethnography, a classic qualitative method has been used in anthropologic field studies by researchers such as Margaret Mead (1901-1978), who lived among the populations she studied for extended periods of time. However, it was George Herbert Mead's work, with its roots in sociology having been refined by Herbert Blumer at the Chicago school, that inspired Glaser and Strauss to develop the qualitative method now widely used across disciplines—grounded theory (Charmaz, 2003).

Barney Glaser received a PhD from Columbia University in 1961. After pursuing other endeavors in quantitative science, he moved to the University of California, San Francisco, where he met and began collaborating with Anselm Strauss. Strauss had been trained at the University of Chicago where he worked with Herbert Blumer, and, therefore, had a strong link to SI. Together Glaser and Strauss defined grounded theory as *human reflection, choice,* and *action*. Their pragmatic philosophical tradition, which emphasized process and meaning, emerged at a time when positivistic methods, known for their valid and reliable instruments and replicable research design, dominated research. The epistemological assumptions, logic, and systematic approach of grounded theory are reflective of Glaser's quantitative training at Columbia. Strauss' influence is seen in how grounded theory uses pragmatic analysis paired with ethnographic research methods. In part, because of the synthesis of their individual perspectives in a climate when theory was considered separate from research, Glaser and Strauss wrote explicit

guidelines for conducting qualitative research that changed earlier methods of oral tradition (Charmaz, 2003). Due to its inductive method, grounded theory is considered by some theorists to be positivistic and by others to be more interpretive; perhaps the debate explains why it has become widely used as a research method in the social and health sciences and in many other fields, including business, information technology, and psychology (Urquhart, 2002).

Grounded theory is defined by its pragmatic inductive guide to data collection and analysis. The Zen Master Shunryu Suzuki teaches of the value in using "beginner's mind" when seeking truth (Suzuki, 1970). Beginner's mind is free of preconceptions that distort what is really happening. It is not so much a notion of emptiness as it is a guide to being fully alert and awake. As a research method, grounded theory may be thought of as an exercise using "beginner's mind"; because unlike hypothesis testing, it does not seek to confirm an answer to a research question, but rather to identify the realm of experiences that are involved in a phenomenon. Glaser and Strauss defended grounded theory against the dominant view of the mid 1960s that only quantitative methods provided sufficient systematic query to be considered science.

A hallmark of grounded theory is its process of developing analytical interpretations from the data, using theoretic sampling, along with rigorous methodological data analysis, and using open and conceptual coding strategies. As a way of allowing the researcher to interact with the data and the process of analysis as a way of sorting out emerging themes across interviews, memo writing is another important piece of the rigor. This systematic process of induction from themes within the data themselves

influences subsequent data collection that not only serves to corroborate findings, but it also contributes to an emerging theoretical framework (Denzin & Lincoln, 2000).

For those who are familiar with grounded theory, it would be a glaring omission not to mention the debate that exists between whether grounded theory is positivist, based on its origins with SI, which is claimed by the early work of Glaser and Strauss (1966), or interpretive, making it more in line with philosophical qualitative works such as phenomenology, ethnography, and hermeneutics (Urquhart, 2002). Glaser and Strauss (1966) stress the emergence of themes as method, whereas Strauss and Corbin (1998) describe reality as something that is not necessarily known but interpreted. Similarly, grounded theory is challenged to define itself as an objectivist or constructivist method. Constructivists recognize that the viewer seeks to define conditional statements and, in so doing, creates the data and analysis through interacting with what is viewed. Conversely, the majority of grounded theorists, objectivists, adhere more closely to traditional positivistic science (Charmaz, 2000). The evolution of postmodern grounded theory from its positivist roots is led by Adele Clarke (2003), who describes her goal as one of regeneration and expansion of grounded theory through using analysis techniques such as situational and positional mapping of data. The purpose here is not to belabor the differences in this debate, but to illustrate the fact that such debate exists is testimony to the dynamic nature that ultimately strengthens the method.

This study specifically relies on Strauss' and Corbin's work in which the participant is interpreted as reality, using the theoretical guide of SI as a framework for selection and interpretation of meaning.

Rational for Using Grounded Theory in Occupational Health

This study used grounded theory because there is little known about the nurse's experience of injury and because of the social context in which work is situated in a person's life. Although grounded theorists tend to study a slice of social life, it is not commonly used as a research method in occupational health. In fact, although occupational health research enjoys a long history, existing studies are heavily weighted in favor of using quantitative methods.

There are several exemplary studies that have tried to capture the human experience of occupational injury and illness using measurement tools that quantify change in the injured worker's world after injury (Cheadle et al., 1994; Keogh et al., 2000; Morse et al., 1998; Pransky et al., 2000; Yelin, 1986). It is just such research findings, combined with qualitative methods used to explain the experience of acquired disability (Charmaz, 1995; Cowley, 1991; Koehler, 1989; Nosek et al., 2003) that are the inspiration for using grounded theory to discover the range of issues experienced by injured hospital nurses.

Another support for grounded theory as the methodology that is particularly applicable to occupational health is its roots in positivistic science that guide rigorous methodological analysis. By gaining a theoretical understanding of changed meaning in the world view of the injured nurse, it is more likely that practice and policy interventions may be identified, which can reduce the negative consequences of injury as reported in other studies. It is very encouraging that many of the exemplary quantitative studies cited in the preceding literature support the need for further understanding of meaning (Biddle et al., 1998; Cheadle et al., 1994; Fulton-Kehoe, Franklin, Weaver, & Cheadle, 2000; Keogh et al., 2000; Morse et al., 1998; Pransky et al., 2000). These study findings

quantify factors related to disability and suggest that the injured worker's experience of changed meaning is of the utmost importance when trying to understand the consequences of work-related disability.

The well-documented usefulness of grounded theory in other forms of social research, which focuses on understanding disability and the consequences of chronic illness, further supports its potential contributions to occupational health (Charmaz, 1983, 1990, 1995). Given the inductive qualities described by its structured format as a research methodology, grounded theory cannot only stand alone, as proposed by Glaser and Strauss (Charmaz, 2003), but equally important, it is uniquely positioned by the very same principles to withstand peer review, while the method allows for assimilation of study findings into the existing science of occupational heath.

Defining the Process of Building Theory

The interactive process of grounded theory begins with general topic questions. The questions are derived from the background of the researcher and his or her assumptions or disciplinary interests. Blumer (1969) calls these general assumptions *sensitizing concepts* because they sensitize the investigator to ask particular questions that themselves originate from the researcher's assumptions. Once data gathering begins, these concepts and initial questions become a point of departure, allowing the researcher the flexibility to pursue further development of the categories, rather than limit the focus of inquiry to its original concepts.

Since data generate the sample and the research questions, a key element of the research process is the ongoing analysis of data as they are collected. As themes emerge from the data, they act as a guide for the research. Using a *beginner's mind*, the

researcher strives to maintain the role of novice with regard to the phenomenon. By refraining from conducting an initial in-depth review of existing literature on the topic, the researcher remains open to the possibilities revealed by the data. The first level of insight is demonstrated by early generating sensitizing concepts. In doing so, the researcher is free to follow the lead of the data as themes are revealed. One of the core principles of grounded theory is the generation of analytical categories that develop from within the data.

Grounded theory is often interpretative because data are not necessarily used verbatim. Methods that are sequential, methodical, and highly structured conduct the interpretation of the data. Data gathered from participant interviews should be "rich" with description, revealing thoughts, feelings, intentions, and actions (Charmaz, 2003). The role of the researcher during the interview process is to obtain rich descriptive narratives from each participant. Sources of data collection include semi-structured interviews, participant observations, documents, and other events that lend context to the research topic. Empirical descriptions are derived from demographic variables gathered from the various sources of data, and they are useful in situating the data within a setting, collective meaning, individual interpretation, or action. Charmaz (2003) suggests *rich data* comes from questions that begin with "*Tell me about, How, What, When,*" or more specifically, "*Could you describe ____ further*" in order to obtain a participant's full view and action.

Research Design

Motivations and Obstacles to Employment for Nurses—Sub-Study

In this study, interpretation of the data was done using methods that are sequential, methodical and highly structured. Key traditions of grounded theory have been adhered to, including:

Coding

Coding is the naming of themes within a single and multiple interviews, starting with line-by-line coding, then axial codes that articulate emerging themes and finally into categories, thereby raising a conceptual framework out of the content.

Convenience sampling

Convenience sampling is a sample that is based on availability of potential participants in order to consolidate themes and contribute to the theoretical framework. Theoretical sampling, generally part of the methodology was not possible given the research design of this sub-study.

Memoing

These are written personal contextual narratives by the researcher on conceptualizations that rose from the data, interview process, or analysis of a concept related to the topic, and were used to maintain awareness of what was happening conceptually within the verbatim text.

Integration

This is conceptual analysis of the codes and categories that allowed a central theoretical category to rise from the codes—grounding the theory *in* the data.

Verification

This is similar to reliability and validity grounded theory, because it uses methodological techniques, including design, descriptive vividness, methodological

congruence, analytical preciseness, and theoretical connectedness, as verification standards (Burns & Grove, 1995).

Study Purpose

The purpose of this study was to explore the experiences and perceptions of being an injured worker. Specific aims were to:

1. Describe the subjective meaning of loss of ability and its full impact on an injured worker's life.
2. Understand the influences of work climate on the injured worker's experience.
3. Identify motivational and or obstructive factors that influence work ability.

Study Sample

The sample was drawn from a group of nurses who were participants in the Gradients of Occupational Health in Hospital Workers (GROW) study, led by principal investigator Paul Blanc, and began in 2003. The GROW study has used a combination of quantitative and qualitative methodologies. GROW study participants included randomly selected hospital workers from two urban hospitals in northern California (Gillen et al., 2007; Gordon et al., 2005; Janowitz et al., 2006; Rugulies et al., 2004), and it is federally funded by the National Institute for Arthritis, Musculoskeletal, and Skin Disorders. This researcher has been an assistant with the GROW study since January 2003. In the GROW study, participants were defined as any hospital worker, other than physician, who presented to the hospital occupational health department with an acute or cumulative musculoskeletal injury that was evaluated and determined to be work-related. Referents were matched to the cases by either job group, shift, or by random. Referents matches were recruited using names provided by each site's human resources as appropriate

matches. The MORE Nurses study began following both phases of GROW study data collection. Nurses were the single largest group of hospital workers in the GROW study (n=243), comprising 37% of the 664 participants.

There were 228 registered nurses (RNs) of whom 56 were cases, in the GROW study from which the MORE sample was derived. All participants were interviewed twice (Time 1 and Time 2) with the second interview occurring approximately two years after the first interview (Rugulies et al., 2004). The mean age of the GROW study nurses was 45.43 years (S.D. = 10.12), and 83% were female. They worked an average of 38.07 hours per week (S.D. = 8.16) and a little over a half hour of overtime per week. The typical shift for the GROW nurses was 12 hours and the mean number of shifts missed during the prior 4 weeks was 2.32 shifts (S.D. = 4.0).

At Time 2, typical shift length and number of shifts missed during the month preceding the injury did not differ substantially from Time 1. GROW nurse participants also reported a variety of physician-diagnosed co-morbid health conditions: asthma (17.1%); diabetes (5.3%); arthritis (18.9%); hypertension (21.5%); back and neck conditions (27.2%); carpal tunnel syndrome (11.4%); and tendonitis in various body areas (22.4%). In addition, they reported having other serious responsibilities including the care of young children (42%), the elderly (16%), and the disabled (10%).

From this sample, nurses for the MORE sub-study were recruited. Of the 228 original participants, 61 were not available for follow-up study for a variety of reasons. Of the remaining 167 potential participants, 44 were cases. Twenty potential participants were contacted in the initial mailing at the end of May 2006 which resulted in 11 completed interviews. Of these 20, 17 were cases and 3 were referents. A second mailing

to 20 additional nurses was conducted six weeks later, resulting in 5 more completed interviews. Of these, 17 were cases and 3 were referents. Two potential participants returned refusal cards by mail, four more declined when contacted by telephone. Those who declined indicated they did not have time for an additional interview. Ten potential participants were unable to be contacted by telephone following the initial mailing. In order to capture the experience of the injured nurses, those who were classified as cases were the primary focus of recruiting efforts. A substantial effort was made to recruite referent nurse, some of whom were contacted by telephone, bu they were unable to complete an interview, therefore, all completed interviews were classified as cases in the GROW study.

For the MORE Nurses study, this convenience sample of nurse participants was selected from among the total case sample as defined by the GROW study inclusion criteria. Potential participants were limited to those who 1) were GROW study nurses who had completed an initial and follow-up structured questionnaire, 2) had patient-care responsibility, rather than solely an administrative role, 3) were registered nurses, and 4) had indicated a willingness to being contacted further (i.e., after the second GROW interview). Given the selection criteria, the potential pool of participants for the MORE Nurses study was 167, 44 of whom were cases. To capture the experience of the injured nurses, those who were classified as cases were the focus of recruiting efforts. Effort was made to recruit referent nurses, some of whom were contacted by telephone but they were unable to complete an interview, therefore, all completed interviews were classified as cases in the GROW study.

The nurses who participated in this sub-study were individually interviewed about their injury and return-to-work experiences as well as topics that identified motivations or obstacles of working after an injury, such as the meaning of their work and issues related to their personal and family life. These interviews were expected to provide information beyond the injured worker's immediate experience by including other environmental and social issues expressed during the interview.

The physical nature of the work climate as well as the collegial association and role identity that the nurses share may influence return-to-work outcomes. Hospital nurses frequently change jobs within the hospital setting, and many nurses have worked in a variety of assignments. To enhance the likelihood of gaining the full range of perceptions held by this group, the MORE Nurses sample included the widest range of participants who describe themselves as registered nurses, rather than an attempt to limit the sample based on a more specific job title or a particular hospital unit. Since the overall aim of this sub-study was to discover the full range of experiences of being an injured nurse, as well as motivations and obstacles of returning to work, no effort was made to exclude nurses who may have had prior injuries unrelated to their participation in the GROW study.

Demographics of the potential pool of participants for the MORE Nurses study were reviewed to gather a range of nurses working in different clinical settings. All participants were employed at the time of their interview; therefore, none had suffered a catastrophic injury or job loss, though they had knowledge of co-workers who had.

Sample Size

A total of 16 nurses were interviewed for the MORE Nurses study. Generally, in grounded theory the exact size and makeup of the sample is influenced by the ongoing analysis; therefore, may change based on new information. A convenience sample was used in this sub-study design because of the limitations of the available pool of nurses who fit the inclusion criteria. For example, only hospital nurses in the two settings who were part of the GROW study were available for interviews. Since there were only selected numbers of those who were clinical nurses, it was not always possible to vary the participant pool based on the emerging themes in the interviews.

Data analysis was ongoing during data collection in order to evaluate emerging themes. Analysis during data collection revealed a large number of nurses who were categorized as cases, who also had multiple unreported injuries, therefore, their experiences with unreported injuries created a shift in recruiting efforts de-emphasizing the effort to recruit referent nurses, instead focusing on the injured nurses' experiences. Data collection was considered complete when the interviews did not reveal new themes.

Data Collection Procedures

Only GROW study participants who described themselves as registered nurses and who agreed to participate were eligible for this study. As potential participants for this sub-study, all GROW study nurses were mailed an introductory letter explaining the study purpose, along with a Study Information Fact Sheet (MORE Nurses study), a postage paid refusal card, and two copies of the consent form. GROW study nurses who did not decline were contacted by telephone to answer any further questions and schedule an interview.

Individual semi-structured open-ended face-to-face or telephone interviews were conducted with participants in locations that were mutually agreeable and that allowed privacy and confidentiality. Interviews were audio taped and transcribed verbatim, then the tapes and transcripts were compared to ensure the most complete and accurate transcript possible. Interviews were coded to remove all identifying information from interview transcripts.

The interview guide for cases (see Appendix A) focused on the following major areas to determine the consequences of injury and sources of motivation or hindrance to work:

1. The meaning of being a nurse
2. The injury experience and impact on work
3. Work climate, including experiences with injured co-worker nurses
4. Injury effect on life outside work

As previously described, meaning is a dynamic process occurring along a continuum of experiences. Fife (2004, p. 311) describes the factors that affect the formation of meaning as:

1. The extent to which a person perceives she or he can control the situation.
2. The objective ways in which an event affects the individual's current ability to function.
3. A change related to an event that results in a shift in the way others perceive the individual.

These factors have been used in the development of an interview guide for cases and referents to capture 1) how nurses can control injury events and their personal and

workplace consequences, 2) the nurse's ability to function within the disability system, both of those specific to the setting and those related to workers' compensation, and 3) the extent to which significant others in the nurses' world reveal a shift or change in their perception of the nurse's role.

The interview guide was intended to facilitate information gathered while still allowing participants the freedom to generate their own descriptions of work-injury experiences for themselves or their co-workers. Because the focus of this sub-study was aimed at generating new knowledge regarding the perceptions of return-to-work obstacles and motivations held by nurses, effort was made to allow participants an opportunity to use their own words as much as possible and thus using scripted questions only as a guide. The guide was developed to initiate participant's disclosure relevant to the major areas of interest.

Nurses with injuries were asked to describe their direct experiences, and were asked to provide their perspective on working with injured nurse co-workers. In addition, they were asked to express their perception of the hospital work climate for the injured nurse and their role identity within the nursing profession. Follow-up interviews were conducted as needed to clarify or enhance data obtained in the initial interview. Face-to-face interviews were conducted in all but one interview, which was conducted by telephone because of the participant's job change following injury.

Consent and Risks

Consent from participants was consistent with requirements of the Committee for Human Research (CHR) at the University of California, San Francisco (H6165-18696-06). Once potential participants had an opportunity to receive answers to their questions

about the study by telephone, an interview appointment was be made. Written consent was obtained at the time of the interview; in the event of the telephone interview, consent was obtained by mail.

The risks of this sub-study were minimal and included potential loss of privacy and confidentiality; however, every effort was made to maintain confidentiality of participants, including removing all identifiers from transcripts, notes, and forms. Because of the sub-study design, GROW study nurses were asked to participate in this subsequent interview, which posed an additional burden because of the request for even more of their time. Thus, participants were offered an interview schedule that would accommodate their personal time as much as possible.

Data Analysis

All interviews were personally conducted by this researcher between June 2006 and August 2006. Grounded theory semi-structured, open-ended, face-to-face, or telephone interviews were conducted using the interview guide. Analysis of the interview data was concurrent with the ongoing interviews and helped formulate the direction of subsequent interviews based on emerging data. For example, because of the frequency of injuries described by the participants, emphasis of the injured nurse's experience rather than those of non-injured nurses became the focus of recruitment within the sample. In addition to the interview, participants were asked to complete a single-page demographic questionnaire. Field notes generated during the interview process were analyzed as well as the interview transcripts. Data were organized using Atlas-ti, which is software that is limited to data management and did not replace the researcher's manual data analysis.

Analysis began with line-by-line open coding of each interview transcript and continued throughout the process of writing the results. As the process of coding continued with subsequent interviews, some codes began to repeat across different narratives. As the number of codes became duplicative and representative of multiple participants, they were organized into tables based on similarities and differences. These consolidated groups of codes became the early foundation of the emerging categories.

Partly because of the volume of narrative transcripts, the long list of codes, and because the nurse's stories included data that were interesting but tangential to the aims of study, continued effort was required by this researcher to maintain focus of the emerging categories. The analysis process was consuming, and hours were spent reviewing codes, and writing memos to recognize connections between categories that were representative of conceptual meanings.

The groups of codes were examined independently, frequently going back to the transcripts to maintain context of the emerging abstract concepts. It was particularly helpful to go through the process of axial coding because it allowed this researcher to manipulate context, conditions, process, and consequences to get the best fit within the data. The three major categories with the best fit were diagramed to aid in visualizing the components of each category, which also showed the connections between them. Multiple diagrams of axial coding were constructed of the categories that were continuing to emerge from the data. These diagrams were further refined as different categories seemed to become duplicative between the themes. During the phase of thematic generation and axial coding, more detailed memo writing was used to allow this

researcher to interact with the data, thereby really *seeing* what was going on within the data.

Theoretical and Methodological Verification

The back and forth analytic process involving data, open codes, axial codes, and thematic categorization provided the foundation necessary for the abstraction, which is key to the development of grounded theory. By constructing increasingly conceptual memos, based on the thematic categories, a central theoretical category emerged as the most salient to description of the process of acquiring identity based on the hospital nurse's injury experience.

This researcher worked with an experienced grounded theorist and received guidance and feedback, along the process of design, collection, and analysis. In addition, this researcher met weekly with a small group of other researchers during data analysis, sharing memos and other forms of thematic analysis.

Strengths and Limitations

An obvious limitation of the study is the sub-study design that limits participation to GROW study nurses. However, nurses comprised the single largest group of participants, (n = 242, or 37% of the 664 total participants), hence the reason for selecting this group for follow-up. The design did not allow for theoretical sampling, which would have been preferred with grounded theory, yet efforts were made to select a purposefully diverse sample among eligible nurses. All participanting nurses reported an injury in connection with their participation in the GROW study, yet had other work injuries as well. Referent nurses in the GROW study were not successfully recruited for interviews which limits the contributions non-injured hospital nurse may have made to the findings.

The sample is strengthened by the fact that it draws on nurses who work in two different work environments, thereby providing added depth to an understanding of the workplace influences for those working with injury in more than one hospital setting. Another strength of the MORE Nurses study is the level of collegial support obtained during data analysis, from both an experienced grounded theorist and a peer research group, which added to verification of the findings within the narrative.

Practical Implications

Gaining a deeper understanding of what motivates or inhibits injured nurses to work after experiencing an injury can enhance retention of this highly skilled workforce and promote a sense of wellbeing for the nurse and those who work with him or her. Individuals, who are someone's co-worker, parent, spouse, or family member, comprise the work-related injuries that are reported in California each year. Although understanding the meaning of the full experience held by the injured worker is a difficult task, doing so offers the possibility of gaining insight into what is often a significant life event, which can minimize the human and economic cost of injuries.

CHAPTER FOUR: FINDINGS:

A DESCRIPTIVE BASIS FOR A THEORY OF ACQUIRING MEANING AFTER WORK INJURY

The thematic descriptions of the salient dimensions of the data found in the narrative will be presented in Part One of this chapter, followed by the integration of the thematic conceptualization and verification of the grounded theory in Part Two.

Sample Characteristics

A convenience sample of 16 was drawn from a group of nurses who were participants in the Gradients in Occupational Health in Hospital Workers (GROW) study that began in 2003, and data analysis is ongoing. The GROW study, funded by the National Institute for Arthritis, Musculoskeletal, and Skin Disorders, included randomly selected hospital workers from two large public hospitals in California. This researcher was an assistant with the GROW study from January 2003 until January 2006.

Registered nurses and licensed vocational nurses, comprised the single largest occupational group this sample (n = 243, or 37% of 664 total participants). Selection criteria for the MORE Nurses sub-study included only registered nurses who provided patient care and had completed all phases of the GROW study. Although an effort was made to include both men and women, the sample was all women, partly because of the limited number of male nurses in the sample pool who met the selection criteria. All of the participants were employed at the time of the interview. Nurses who were contacted by telephone but declined to participate in an interview cited lack of time as their reason.

The mean age of the participants was 51.5 years (SD = 7.4). The participants reported, on average, that it had been 24 years (SD = 8.0) since they became licensed

nurses; the median years of service was 18 years. Four participants received their nursing education outside the Unites States (i.e., Canada, Ireland, Philippines). Overall, seven of the 16 nurses were born outside the United States, including Canada, Ireland, China, and four in the Philippines.

Participants became qualified to take the California State Board of Nursing examination by completing a hospital-based diploma program (3 years), associate degree (ADN), or bachelor degree (BSN) program. All took the same state board examination to become registered nurses. Five reported having completed a hospital-based diploma training program, one of whom subsequently completed a bachelor's degree in psychology. Of the nurses who attended college programs, many did so in stages. For example, three were first licensed vocational nurses (LVN) before completing associate degree in nursing (ADN) programs and one participant progressed from LVN to a master's degree in nursing.

When asked whether there were other nurses in their family, 10 reported close family members in nursing or medicine and recounted camaraderie with family members because of their shared values and experiences. Others reported having been inspired to become a nurse by a significant person outside the family, and many said they would encourage their children or siblings to become nurses. As one nurse enthusiastically put it, "Absolutely! I think it's a great career, and I always encourage other people that are thinking of going into nursing."

The study participants were employed by one of two large urban hospitals in California that have been affiliated with each other since 1873. One hospital is a 320-bed, level-one trauma center that serves a predominantly underserved, urban population,

regardless of ability to pay. The other, a 535-bed medical center and teaching institution, is recognized for its state-of-the art innovative patient care and technology, along with its excellence in clinical and basic research. The hospitals are separate entities with regard to nursing administration, but they share a medical faculty.

Part One: Study Narratives as Thematic Descriptions of the Nurses' Injury Experiences and the Process of Acquiring Meaning After Injury

The nurse's experience of work injury involved the injury event, including, pain and return-to-work issues within the context of the nurse as *self*, family member, co-worker, and professional. The injury experience cannot be fully understood without understanding the contextual meaning held by the individual nurse regarding the work itself. Nursing is work that focuses on providing care for others outside the self. Yet when an injury occurs, the provider of care also becomes the one who needs care. The following four themes were used to organize the concepts of the narrative to capture the process of acquiring identity from the experience of being an injured nurse:

1. Meaning of Being a Nurse
2. Injury Experience and Impact on Work
3. Work Climate and Experiences with Injured Nurse Co-workers
4. Injury Effect on Life Outside of Work

Meaning of Being a Nurse

Participants described their work in ways that included public acts of caring for others in the hospital setting. Embedded in their public persona, nurses revealed a privately held connection to their work that was reflective of their self-identity. Meaning

was derived from several categories, including family connections, philosophy of work as job, career, or calling, and practice setting.

Work as a Form of Family Fit

Nurses often served a family role as a medical resource or were even considered the family medical expert: "I am the…doctor of the family." Very often participants disclosed being part of an extensive family lineage of medical professionals. In fact, many nurses were recruited by others they looked up to, and they, in turn, recruited other family members to their profession. Many nurses recalled with fondness a meaningful person in their life who inspired them to become nurses. Their personal connectedness to nursing reveals a shared emotional connection with others they value, often within their family or close friends:

> An aunt of mine is a nurse. That is how I became interested… basically I looked up to her, she was a role model.

A common family link in particular is to a mother who is, or wanted to be, a nurse:

> My mom always wanted to be nurse. She was born during the depression and couldn't go to nursing school…so she always worked in medicine and she told stories of how she wanted to be a nurse…she became a medical assistant and my sister does home health.

> My mother always wanted to be a nurse, but she quit school after tenth grade because she had to go to work.

> Actually my mom was a nurse…my dad's brothers were doctors, my oldest sister is a nurse, my second to the oldest has worked as an RN for some years and my third to the oldest, she is a medical assistant.

Identity Status as Nurse: "I am Totally a Nurse"

The roots that secure these nurses to nursing are deep and broad. When asked to recount what drew them to nursing, participants often described a kind of emotional

decision process related to a childhood experience or a connection with an important person in their life, rather than a formulated career path. Although other careers may have been considered, and several participants had college degrees in areas in addition to nursing, those areas did not hold the same fit as nursing. For example, one nurse who had initially declared her college major to be psychology changed to nursing when her closest college friend, who herself was a nursing major, suggested it. Once she discovered nursing, she described her connection as something she was *born* to do:

> I like caring for people. It's why I went into nursing. I mean, it's why… it worked…It was perfect. Thank God I did it because it's the perfect job for me. I am totally a nurse. I was born a nurse…I just didn't know it until I tried it!

Nursing: a Reflection of the Self as Job, Career, *or* Calling

As a way of understanding the influence that role identity, as a nurse, has on self-identity, participants were asked to describe their personal philosophy of their work as one of job, career, or calling. They used their own meaning of job, career, and calling, yet their descriptions were surprisingly similar: a "job" was a source of income; a "career" was a level of professionalism; and a "calling" was an altruistic endeavor. Many nurses selected a primary category with little hesitation or discussion, although, at the same time, they recognized that nursing can fall within the context of all three categories and occupy more than one category at a time.

Participants were encouraged to use their own words to reflect meaning when describing their own personal identification with nursing as a *job, career,* or *calling*. When asked, almost all participants selected *calling* without a need for clarification as to meaning. Both their body language and tone of voice indicated a feeling of self-respect or reverence toward the meaning of their work. A few participants chose to combine *calling*

with *career*. Only one nurse selected *job*, but even she acknowledged a shift in meaning, from a position she once considered a *calling*, to her current assignment as a 63-year-old retired nurse who works per diem, as she put it to "pay the mortgage."

Nursing as Calling

Nurses were asked to give examples of their meaning of *calling*. Many struggled as they tried to describe what seemed to be an internalized code of caring rather than a conscious set of actions. The following nurse distinguishes how she found her *calling* when she had to take leave from teaching to care for her parents. She described how others recognized a quality of caring in her that they ascribed to *being* a nurse:

> I was always taking care of my parents, and even before I became a nurse, when I was a teacher, and my father got sick, I took a leave of absence from teaching to stay at the hospital to take care of him. My youngest sister was already taking nursing at that time but others thought I was the nurse not her! She would come to the hospital, see what I was doing then leave. Even before I went to nursing school I have that feeling of taking care of others and making people feel comfortable.

Another nurse quickly picked *calling* to describe how she views her commitment to work that is aimed at service to others. However, she seemed concerned that it was not consistent with a current view of nursing: "Even though it sounds out-dated, I think I would still say calling."

Many nurses expressed insight into their self-identity as one related to a description of their work as *calling*, yet they were seldom able to articulate the philosophical underpinnings of their view. The concept of work as *calling* was generally expressed as not something that is *taught*, but as something inherent within the individual's view of the world:

> A calling is something that happens, at least happened to me. I've always known I wanted to be a nurse.

> A calling…because at a young age, I saw my aunt as a nurse and looked up to her.

Throughout the interviews, nurse identity included a philosophy of work expressed by their desire to achieve a high level of caring for others. Many used *calling*, or a combination of *career* and *calling*, over *career* or *job*, to differentiate this quality. The desire to provide a high level of caring for others was expressed as an influential contribution to a feeling of purpose and meaning in their work. Individual nurses used both religious and secular references to describe their meaning. For example, one nurse who is an 8-year veteran of working in an intensive care unit (ICU) explained:

> I'm not religious at all. I mean, I feel very spiritual, but I don't practice anything. Over the years, I've developed sort of my own spiritual guideline. I mean I don't really know how to explain it, but I actually very much consider…this is going to sound weird, but work is my church. I go to work and that to me is connecting with people and I can't do any more community service than that. And that to me is what God is, just being able to share in tie that binds us. There is in all of us something we share and my work is trying to get to that and trying to connect with that. And if I'm taking care of people in their most dire situation and the neediest time in their life… and I'm doing something… you know, so private and personal and so important to their body and to the family, I don't see how I can comfort people more than that. So that to me is church. I mean I don't feel like I need to go to church to experience sort of a God, or some kind of spiritual connection with other people, it's in my work.

However, another nurse with 22 years in the ICU, who was not so cautious to avoid a religious association, reflected on how she viewed patient care as her service and reward:

> For me it's a calling. I'm very passionate with my work. It's just like a religion …It's what I do, what I feel. It depends how you think of it. [For example] cleaning the mouth… cleaning the mouth is like, you know, like what you want to done for yourself. [And I do] what I want done for me… I'm very passionate with my work. It's just like a religion and you do what you need to do… because you know that it's God's giving. It's what you do to…'for the least of your brethren'…that's what I do.

Both eloquently articulated their way of seeing others as a reflection of how they would like to be seen and a way of treating others the way they would like to be treated. In doing so, they seemed to convey an understanding of themselves as an extension of the patients they care for. These nurses recognized that a function of their work role was to perform a greater good in their service and care of others. This quality was associated in the way they cared for patients, how they felt about themselves as nurses, and it was something they could recognize in each other as well.

Another important point that illustrates the intimate and altruistic nature of how nurses derive meaning by performing their work had to do with their awareness of the *awe* of their work or what they often described as their *privilege*:

> So I feel like what I do… I feel very privileged. You get to be with people being born, and people that are dying, those who are sick and those who with care…get better.

Participants described the process of acquiring a meaningful identity as a derivative of how others view their work quality. When work function is consistent with achieving a high quality of caring, recognized by others, including patients, colleagues, family members, and the public, it imparts a deep meaning of self-identity to the nurse doing the work. The meaning acquired through the interaction with others, particularly those of importance to the individual, is consistent with the tenets of SI as to how the meaning of self is derived:

> I do what I need to do…give them a bath. And they [nurse co-workers] are saying, "What is your secret?" And the secret…you know, with agitated patients…you make them comfortable…You know what I did? I shampooed her hair, and then gave her a bath, and she was quiet… I'm very proud of it.

To learn more about the qualities of *calling*, participants, who described their work as a *calling* or *career*, based on a level of achievement in caring, were asked whether *calling* could be taught (i.e., if the highest achievement in caring was viewed as *calling*, how can more nurses become aligned with that philosophy?). Their responses were consistent with this nurse who herself holds a graduate degree in nursing but started as a LVN:

> The career person, I think, can be groomed by other nurses who have a calling. Those are the ones that can be mentored. The people who see it as a job, I think see it as a job…and that won't change. I really don't think the job people can be mentored. I think they can be precepted and I think they can be taught the organizational expectation…but it won't reach the level of calling.

Nursing as Career

Career meant something different than *job* or *calling* to the participants. Most nurses felt *career* fell closer to *calling* than *job*. Yet, for some who had difficulty using *calling* to describe their philosophy of caring, they felt more comfortable combining *calling* with *career*. Still others, who selected the word *career*, described their work as something more analogous to descriptions of *calling*—that is, something rooted in caring for others in need, as an altruistic ideology rather than a function of career achievement:

> Oh. I… It's not a calling. [What does calling mean?]. A calling is… It's like being driven to do something. I feel like its [nursing] always been a … a happy compromise. I mean, I think it's so hard. It's such hard work, but there are so many wonderful things about it. So I feel like what I do… I feel very privileged. Uhm… I don't feel like it's a calling for me, but I feel good about what I do. Yeah. I think it's more than a job.

One nurse found that taking a job in an area outside nursing mid-way through her nursing career, then subsequently returning to nursing, allowed her to compare differences in her identity as a worker in both settings. The experience allowed her to reflect on the

meaning she derived from work she considered a *career*—library science and nursing, which she felt was more of a *calling* than a *career*:

> That's what I missed when I was like doing the corporate thing… I mean there are things that I hate about being a nurse and there's things that I love about the privilege and … that's what I missed when I didn't do it at all.

The difficulty in proposing words for participants to select that described their internalized meaning of nursing is illustrated here by one participant's reluctance to associate her with work as *calling*:

> Well, see, I've never thought of it as a calling, or a vocation. I've seen it as a career. Even as a young girl you saw it as a career. You know, like I care for my patients and everything, but I'm not like a nun. I'm not… it's not a vocation for me. You know, I mean, maybe that's why I'm in the OR.

Consequences in the Workplace when Nursing is a Job

When asked what a *job* meant, most associated it with working for a paycheck: "The corporate kind of thing…that's how I think of a job." Although the participants gave examples of ways their achievement of a high level of caring resulted in a positive sense of *self*, they also shared their perceptions of nurse identity they did not value and therefore separated them from some of their co-workers. Here nurses describe a level of caring that includes consequences of when caring does not achieve a high level, which is associated with *calling*. These examples not only describe lack of the quality of caring, but they also depict a source of conflict among co-workers in the patient care setting:

> It irritates me when you see…that they [nurse co-workers] would first touch the patient at five o'clock in the afternoon when they've been there since seven o'clock in the morning.

> [When asked a patient assessment question], they say, "I don't know, I haven't had that patient before." It irritates me to have a nurse say "I don't know, this is my first day with the patient." Because our rounds start at eleven and their shift starts at seven…I know how busy everyone is. I

> mean I'm as busy as anyone else. But all of us should know what's going on with the patient.

Nurses who used either *calling* or *career* to describe their own philosophy of caring volunteered descriptions of nurse co-workers who they felt considered nursing a *job*. Moreover, those same participants were sharply critical of their co-worker's level of caring and investment, even citing that they felt nurses who consider nursing a *job* as a risk to both patient care and the safety of their co-workers on the unit:

> I guess the difference now is they think of it as a "job." They think, "Well, it's just a job," they make a mistake in medication or something, and they think, "It's no big deal…the patient is still alive." It irritates me to have co-workers like that…nurses rely on each other.

> I guess I have a stereotype of what a nurse should be like, but seeing people come into nursing and it's their second or maybe their third career...and that's great…I think it's excellent that they go back to school and do nursing, but I don't know…it's just something…an attitude, they're not open [to working together]. I'm telling them, "You made a mistake," and I'm trying to be nice and not criticize but they have this wall up. Maybe they have the idea that they are highly trained…but much of nursing you learn on the job…like you don't give a full dose of medication at once, you start slow and increase it.

The situations described by participants reveal how differences in values and philosophy can lead not only to risks in the workplace, but they also may result in one group becoming disenchanted about staying in a setting that relies on mutual cooperation and shared values of the quality of caring:

> I've met some [new nurses] who think now that they have gone through school that is the hard part, and now they have the job, then they think "Why do I have to work weekends and holidays?" They don't have a sense of importance about the work and that it's not a job. And that's, when it gets a little scary, it is important…I don't have time to have those kind of people around me. It makes me think of leaving but I haven't done anything about it.

> They [new nurses] are definitely not committed. That is what frustrates me because I mean, I feel very dedicated to the work and these people come in and want to be spoonfed. They don't have the drive to do things to obtain their [work] goals or be the type of nurse like what I did. And there are quite a few people like that.

When co-workers viewed nursing as a job, rather than an altruistic endeavor, participants described their work motives as pertaining to job security and income rather than an achievement of caring for others. They shared their beliefs that some co-workers entered the profession because other career options didn't work out because of changes in the economy. A clinical nurse, who is also a part-time clinical instructor, described what she observed as a contrast between nursing as a *job* and nursing as a *calling*. Again, her description captures the essence of what it means to *be* a nurse as she describes the quality of commitment and caring. Like others, she does not feel that the level of caring can be taught to those who lack the component of a human connection to the work as she views it:

> [Nursing as calling] I think that's pretty rare now…unfortunately, I think it's pretty rare. I think that most people now especially are going into it because the job market in other areas is not very good. So people who were in computers when that fell through are finding the medical field is stable and steady and good paying, and you can go other places. And so that's why they're going into it. And it's really sad because they're not very good. If you don't have some kind of desire to help people, you just don't make a very good nurse period. I don't care how smart you are or even how affable you are. It doesn't matter if you don't…there's something missing and… I think what it is, is empathy I'm not sure. But there's something that makes someone really love it connect, and if you don't really love it, you just can't make that connection. And you can see it in the interactions they make with their patients. *It's a level of caring you just can't teach, you can't learn.* You either have it or you don't and I think patients notice it when you see them as a person.

Still, other nurses described some of their co-workers who enter nursing today as detached from goals that are connected to achieving a quality of caring, and they do not

believe them to be nurses who would choose nursing if an alternate equally viable job option existed. Their words resonated judgment and frustration with nurses whom they perceived as not sharing the same desire to achieve a high level of caring in their work. Although participants used descriptors like “younger” or “new” to portray these particular co-workers, their judgment reflected a lack of shared values and identity rather than a chronological age or level of experience. In the end, they described the effect of friction as creating an environment that was more divisive than cohesive:

> There are some new grads that now that they are new grads, it's okay with them, they already have their license…they don't care about patient care anymore. They seek knowledge and experience because it's a job, they just want to be a nurse so they can buy a luxury car or go on a cruise. They want to go up in the ladder. So it's not a calling. It's just a career promotion but the calling is not there.
>
> It is absolutely different with them. Now we have to document using computers…but they are checking their e-mail, and are shopping on eBay and Macy*s …the kids do not have the passion we do.
>
> Before they would never want to be a nurse, but now the job market for nursing is secure and the pay is higher than other careers.
>
> I think the older nurses, if they are not burned out, they are passionate. And they have certain sort of responsibility and accountability. Whereas, I think some of the newer nurses…this may not be fair to say…they bring a lot of technology skills that the older nurses lack... But the older nurses have sort of this…it’s funny…it’s like a calling type of thing. I just feel like it’s something deep inside.

The Role of Place in Being a Nurse

Being a nurse is more than completing an education and becoming licensed. The nurses here specifically selected their particular hospital as the *place* for them to *be* the nurse they want to be. Some have, by choice, not worked in any other hospital since completing their education. Others voiced the importance of their particular workplace in contributing to their personal achievement in the role of being a nurse. In this way, work

climate or the collective spirit of the workplace became a dimension of the self-meaning that contributed to *being* a nurse.

One example of this involved a nurse who decided to transfer to a job in a hospital closer to her home following her injury. This move reduced her daily 4-hour round trip commute to only a few minutes. However, she recognized the cost involved in her decision to transfer because her new job did not require her previously high level of professionalism and skills, which she describes as a loss:

> That's why for myself, although I accept being away from a trauma hospital, probably some of my assessment skills are not really that sharp as when I was working at [hospital A].

This nurse recognized a contrast between hospital A and the place where she currently works—a small community hospital. In her new setting, she didn't see that the other members of the medical team recognized her nurse co-workers for their professional skills and judgment:

> I heard a lot of things [from the doctors] like, "Oh… I don't know these nurses in the second floor…They don't know how to take care of patients with low blood sugar." I even overheard one nurse saying like… "That's enough orange juice…that should take care of it."

She also says that she minimizes her loss by recognizing that she carries her identity as a nurse with a level of skill and caring no matter what setting she is in. Her description reveals the readiness of her skills as she waits for an opportunity to use them in her new setting:

> But I still have it with me. Like looking at a patient who has a temp you would question yourself about the kind of problem that they have. It's usually either respiratory, urinary, or there's some organism in the blood.

As she continues to recognize her lost spirit in her former workplace, she adds an awareness of how important an influence her workplace is in developing the kind

of nurse she is proud to be—accomplished, able to voice her opinion, and valued member of the medical team:

> When I worked at [hospital A], that's where I learned that you're *with* a doctor [compared to a nurse who works *for* a doctor]. So, I really learned a lot from [hospital A]. Like that's where I became a nurse.

Another nurse who was unable to get a job out of college at her current preferred hospital instead took a position in the ICU of a large private hospital in the same city. She stayed there for 9 months before an opening became available in the hospital of her choice, which was at the public hospital known for trauma care. She considered nursing to be sharply different in the two hospital settings, even though both are well regarded in the community:

> It's too boring there. You would have to compare the regular floor here [hospital A], with the ICU there [that first place I worked]. Its apples and oranges, it was so boring. And the physical care there… [in ICU] compares to the regular floor at [hospital A].

Her description suggests a level of professional pride associated with her current hospital, a place that requires her high level of nursing skill. She went on to say that she has been in the ICU with her current employer for 22 years.

Nurses recognize their workplace contribution as separate and unique within the health care team. This view of *self* arises from their acknowledgement of their rigorous academic preparation and their achievement of working in a medical setting they believe is highly intellectually challenging. In fact, many participants voiced an early awareness that there was no other place for them to work but their current setting, although some had temporarily worked in other settings for various reasons. However, when they were able to join the staff in their preferred setting, they felt they were in the right place with the pace, intellectual demands, and rewards common in a major public teaching hospital.

This gave participants confidence and pride in themselves and their professional judgments:

> The patient population was much more what I was interested in, I liked the feeling. You know? I like to take care of the indigent patients and it's more interesting to me. And I went to their critical care training program just for myself, I just wanted the education, I didn't really feel like I was an IC nurse, I really wanted to get to the ED was all… The training was supposed to be my advance to the emergency department. Then I went to the ICU after I think… in the end it was like seven months and it was like, "Oh this is where…" It became clear to me that I was an ICU nurse…and I was not an ED nurse.

Nurses reported an awareness of identity development in connection to the confidence they displayed in leadership, critical thinking, and decision making. In a medical setting where patient care is the focus of such interactions, the likely result is better patient care:

> I have to use my good decision making skills, and it turns out that we [team members] are the same in the dealing with the patient, our main objective is to take care… to help in all aspects of the patient's life, and also as an individual human being. Like for example, an ortho patient who the doctor who is conservative, just wants to prescribe three milligrams of morphine and I know this patient needs the psychological benefit of a PCA. In my early career I would be quiet, but [hospital A] is where I got my confidence and I'm thankful for that.

When participants reflected on the meaning of nursing, they struggled for words. But with time, nurses articulated a range of experiences that described their own process of becoming aware of the depth of meaning nursing holds for them:

> It's incredibly rewarding. I mean, I won't get a whole lot of reward directly from the patient because most of my patients are in coma. But I find it very rewarding. Especially the fact that… I mean it's totally selfish. I'm not altruistic at all. I mean it's very selfish. And it always cracks me up when people…" How could you do this? You're so giving." No, I get way more out of it… I'm helping people and I'm saving people's lives. On a mediocre day I'm doing things that not many other people would be

> willing to do. You know, I'm cleaning people's bums for a living… You know, when I was a little kid, and you asked me what I wanted to be. I said I wanted to be everybody's mommy. And that's how I feel like. I'm like a mom to everybody and I love it. I love that. So I don't know how to say it… I mean it's so much more specific than that.

Injury Experience and Impact on Work

These data focus on the work injury experience, including initial and follow-up care, such as diagnosis, treatment, work accommodation, and residual symptoms, as a multifaceted effect on the experience. Participants' responses to the injury experience fell into categories, including experiencing the event, decision to report or to withhold the injury, fear of the consequences of injury, tendencies toward self-assessment and treatment, and interactions with the compensation system.

Injury Reporting Decisions

Nurses were asked to share their perspective regarding how the injury happened and what, if any, actions they took after being injured. For nurses in this study, the injury experience began with the premise that work in hospitals is inherently difficult and often requires nurses, like themselves, who consider their work as achieving a high level of caring, to push themselves beyond their physical limit:

> I think it's so hard…it's such hard work.
>
> We are just too exhausted.
>
> I was exhausted. One night, I actually stuck myself three times with the same needle [unreported].

Their awareness was followed by an expectation or acceptance of injury as a consequence of their desire to achieve a high level of caring for patient care

within the demands of their work setting. When seeing injury as a consequence of an assumed risk, nurses tend to minimize their injury experience:

> I never really took it seriously, using body mechanics or being careful because of how easy it is to injure yourself when you're turning four hundred pound people or whatever you are doing…for 12 hours a day.

> I was trying to put that IV and suddenly my patient caught my hand and twisted my arm. That patient, I think, was as far as I can remember was almost 350 pounds…I had excruciating pain. I don't want to remember it anymore.

For the hospital nurse, injury occurs in response to the pace of work and the physical demands of providing patient care. The fast pace and the constant feeling that there is more to do than can be done distracts the nurse's attention from the acute injury event, which occurs in the moment. The result is that the acute injury becomes defined more by the lingering symptoms that remain at the end of the shift, rather than by a particular mechanism of injury:

> The first time I was injured was probably at least 6 years ago, which was not at my current hospital. And I didn't report it. And I wasn't even that badly injured but I remember it so distinctly… and in the morning I left and I got on train and about 15 minutes into the ride I thought I was going to die if I could not sit down and get off my feet. It was this horrific back pain. And I had no idea what I did that shift. I don't even remember my patients. I have no idea what I did specifically to hurt my back. But it was the most horrific back pain. I thought, Oh my God. I'm going to be out of nursing. This could be the end of my career.

Injuries occurred even when help was available. In fact, injuries often happened in the presence of co-workers. Yet, even then, the injured nurse was reluctant to acknowledge the injury in the moment:

> Yeah, if I remember correctly I was orienting a new nurse, so I definitely was helping multiple patients but I felt like I was doing it properly and I didn't have any feelings at the time of the strain at all. And then my lower back just kind of froze. I really couldn't straighten out and so I called employee health. Because I kind of felt like I could get by, I felt that I

> didn't have to leave work. I was working with a new nurse who was almost finished with her orientation so I felt like I could get by and just go to employee health the next day. They [employee health] said it was fine and then I went to see them later. So I basically just had I think a strain. I just strained a muscle and was off work for only, I think, two or three shifts and then, of course, I had the weekend to help. And then I was able to come back and I was fine.

One nurse recounted how she handled a conflict between her desire to keep her injury hidden, and the fact that her supervisor witnessed it and told her to report it. Her way of dealing with the situation was to minimize her injury to employee health by assuring them she was "feeling much better." Her reporting decision was based on a poorly managed light duty assignment she was forced to accept in connection with a prior injury. When she was re-injured, she was motivated to avoid the system, which she had experienced as more of an obstacle to her recovery than a help:

> There was one time, not too long ago that I probably pulled something and I reported it right away, because at the time, the supervisor was right there and he told me I need to document it. So I documented it. They [employee health] called me and I said 'I feel much better'. I didn't want to have deal with them again. Doing light duty job you know, if I am really, really, really injured I think that's the only time I would do that. I can't do that light duty job.

These examples show that nurses with a history of a poor experience with reported work injuries are reluctant to report further injury, which means that many nurses work with injuries that are hidden from others. Frequently, these nurses take it a step further by diagnosing and treating themselves rather than disclosing their injury:

> It [knee injury] reoccurred.... And you know, that time I did not go anywhere for treatment. I just did my own… My nephew was a physical therapist… so he gave me two braces and it helped me a lot.

> So I kind of freaked out and I mean it was incredibly painful. I went home. I mean, I took some Advil. And I slept…

She went on to say that the symptoms resolved, and she did not report the injury. For many nurses, a factor in injury reporting had to do with how well symptoms resolved with time off work between shifts. If they got better with self-care and treatment, the injury was considered incidental rather than reportable. For example, another nurse considered an injury as not worthy of reporting because it had not "stopped" her. With prompting, she disclosed other unreported experiences of injury and expressed that they hardly seemed worth mentioning:

> Just strains…just strains. I think fortunately that is pretty much the extent of it. You know, I'd come home knowing it was a strain… you know, thinking you have to be careful, but nothing like that that stopped me so that I couldn't do the work.

However, when asked whether she felt more vulnerable to further injury after sustaining an injury, regardless of reporting, she shared that, in fact, having an injury event left her fearful of the consequences a subsequent injury might have for her:

> Oh absolutely…I mean, I'm still aware of that. I think it's still…you know, such an assault on your back…doesn't go away.

Nurses reported factors that affect their experience of injury, including responses from medical providers and return-to-work policies of their hospital. When nurses had no control over their work assignment, such as being assigned to "light duty" by disability management, they felt the experience was negative. Light duty for hospital nurses was often a clerical job rather than a patient care assignment. For one nurse, an assignment to "light duty" actually exacerbated her upper extremity symptoms. Her earlier experience made her steadfast in her resolve to take care of herself in the future, even if it meant foregoing covered benefits such as medical care and job accommodation:

> And they're the ones [management] that told me …you have to take modified duty or you won't get paid. In fact, I said, "You know what? I'm not going to do it anymore. I don't care. Just put me sick time if you want. Because… I'm not going to do that [light duty] when I'm injuring myself." Then he said, "You shouldn't answer the phone." Ugh! Yeah well that is what the job is… And now I don't think they don't have modified duty anymore because of that negative thing. It's more like a punishment, plus they make you feel like… "Well you're not injured or you're just pretending to be injured." Something like that…
>
> I'm not… I'm not going on disability again. I don't have to deal with them again. Doing light duty job you know. I can't do the light duty job. I felt thrown to the wolves…being assigned to work other areas of the hospital.

Nurses realize that refusing a light duty assignment would jeopardize their right to disability benefits. Nonetheless, when the light duty assignment was experienced as an aggravation of the reported injury, the nurse's choice was to decline further light duty assignments, even though this meant she did not receive workers' compensation benefits.

Overall, the experience of injury reported by the nurses was heavily influenced by their own experiences of being an injured nurse. They presented many situations in which they made a conscious effort to withhold their injury based on feeling disenfranchised by the treatment they received as an injured nurse. The result was that they remained in the workplace while they sought ways to manage their own treatment and recovery.

Fear as a Consequence of Injury

Work injuries are considered so pervasive in the hospital setting that many nurses projected a feeling of impending doom regarding injury. Some nurses described a source of their fear of injury as being based not just on their experience, but those of their nurse co-workers as well. Nurses rely on each other to do their work, and all the participants described strong personal and collegial relationships as nurses. For this reason, several nurses reported experiencing a

sense of loss when a co-worker was not able to return to work. Their loss was accompanied with the awareness that they too could be just an injury away from the same fate:

> I feel like there are many of us that are just another injury away from not being able to return. I have worked with one nurse in particular that could not return to bedside nursing and the other one I'm very afraid might not because she had a severe enough injury. I worry about her continuing to do too much and have that last injury that takes her away from bedside. I think it would be great loss.
>
> I've seen others get hurt, oh absolutely, many times [on the psychiatric unit]. And I've been attacked [by patients] badly enough so that I could have been hurt, I was just lucky.

When fear of injury comes from witnessing the consequences to a co-worker, it is no less vivid, particularly when the nurse has experienced multiple injury events as well:

> You know, working in psychiatry with very severely mentally ill patients, I've witnessed or heard of just horrendous injuries. The types of injuries I had were more or less related to mild strains. The last injury I had involved me trying to get down on the floor and turn a patient over who was probably having a pseudo-seizure.

Another 63-year-old psychiatric nurse denied any major injuries but recounted several "minor" ones. She, too, reported witnessing multiple occasions when patients' assaults on staff resulted in serious and career ending injuries: "I've been attacked badly enough so that I could have been hurt. I'm getting too old to get hurt!"

Even though all the nurses in this study were working at the time of their interview, the most vivid fears reported involved the personal and professional consequences of job interruption or job loss as a result of a work injury: "I thought, oh my God, I'm going to be out of nursing. This is going to… my career is over."

One nurse, who described having lost track of an injured co-worker until she finally learned the co-worker had sustained a career ending injury and was not coming back to work, associated the experience as fear of being forgotten as being a valued nurse:

> I have worked with one nurse in particular that could not return to bedside nursing because she had a severe enough injury. I think it's a great loss because even though work is challenging you enjoyed who you worked with and people really backed you up. And what I really regret is there was no announcement about her leaving. We didn't have a party for the person…you just turned around and realized, "Oh my gosh! This person faded away." If she had retired, we would have had a party…And also, you know for as hard as you work and for as much as you give to the institution…you're thrown away.

With some probing in the interview process, nurses revealed fears of how an injury would affect their ability to perform their work and how they dealt with their fear. Some said they did not like to talk about it, even in the interview. Others kept their injury a secret from potential sources of support, including their co-workers or their employer; others kept their secret from their families:

> No, I haven't told my family… probably 'cause I don't really like talking about it. I don't really like thinking about it. I mean it's scary to think that I couldn't do this. I mean I don't know what I would do. I mean now that I've got the graduate degree I suppose I could get some CNS job or something like that and but I mean, if it was really bad, I mean if it was sort of like that I couldn't walk around for too long, I mean that would be… I don't know what I'd do 'cause I couldn't even take a full time teaching job because teaching is two clinical instruction days per week.

Even an unreported injury can significantly increase a nurse's awareness of being vulnerable to further injury:

> I don't remember ever having any trouble with my back. I don't know what it was, maybe a spasm or something like that but it really affected me psychologically…

> You get more afraid all the time. And of course you're really worried about your coworkers all the time. Every time I go to that unit…you

> know, I mean I'm just mildly PTSD from that unit, or moderately PTSD from that unit. [psychiatric nurse]

This nurse described her fear of the consequences of further injury as a psychological "injury" arising from her musculoskeletal injury. Hence, even in a case where an injury is not considered sufficient to warrant outside treatment, she perceived it as a threat to her ability to continue as a bedside nurse. Her way of coping with this fear is to make plans for a graduate degree in nursing, which she subsequently completed. This ripple effect is a striking example of how injuries can impact nurses based on their own perceptions of consequences, regardless of injury severity. She used the threat to her identity as a nurse to develop a plan to help her cope with the possibility: "…it was actually what sort of got the ball rolling for grad school." At the time of the interview, she continued to work in an ICU setting after receiving an advanced practice degree. In her situation, receiving the advance practice degree was her self-prescribed treatment plan for the injury she sustained. By implementing her plan, she had what she felt was an effective treatment for her "self-diagnosed" psychological injury, which left her with the fear of potential of job loss.

Fears of serious economic consequence of work injury also are vivid to many nurses, many of whom support their families with the salary and benefits they earned. A gap in income from a job related injury—even if temporary—is seen as having disastrous consequences to nurses and their families. Participants reported very limited or no secondary sources of income on which to rely; therefore, their fears of income loss were palpable:

> Oh, it would be devastating. I think that we'd lose our home. I am the primary breadwinner of the family…

> It would be a nightmare. I've got an incredibly expensive mortgage on this home. It would be a nightmare…. I don't know what I'd do. I really don't. I'd have to… I don't even want to think about it…I would lose my house.

Nurses Tendency Toward Self-Assessment and Self-Treatment

Nurses are health care professionals trained in illness, injury, and treatment modalities. Participants repeatedly described situations where they self-assessed, self-diagnosed, or self-treated their own work injuries with or without seeking treatment elsewhere:

> It was just a strain, but I kind of freaked out. I mean it was incredibly painful. I went home. I took some Advil and I slept…

The nurses often reported how they took charge of managing their own treatment following an injury. One nurse, with chronic right shoulder and upper extremity pain, was released by employee health, and she subsequently implemented many self-treatment measures:

> You know I've done everything I can to have my desk be ergonomic. I pay a lot of attention to my posture. I learned to mouse with the left hand and that has helped.

> I just asked the physical therapist at work to tell me some stretching. I figured there was something more I could be doing. Or at least things I could be avoiding. And, you know, being at the hospital you're sort of surrounded by resources, so I just asked my resources and got my own needs met.

Nurses did not only diagnose and treat themselves, but they also demonstrated ways they used their knowledge to evaluate the treatment they were offered. Based on their own evaluation, they either adhered to treatment or

rejected it. After being released from further medical treatment for her injury, one nurse explained how she used the prescribed foam roller, discarded some parts of her prescribed treatment—anti-inflammatory medications—and added massage and exercise to her treatment without consulting her medical provider:

> I could be better. I hope that the massage will help. And I should be exercising at home… I've had to motivate myself…but I know that will help me. You know I have a foam roller here at work that I lay down on the floor and stretch with. So you know I'm really working hard to take of myself because I have to. But I don't take the anti inflammatory medications prescribed very often because I don't want to worry about my stomach.

The nurses tend to minimize their physical complaints and continue with their work. Sometimes the nurses experienced pain or discomfort while working but discounted the connection to work as the cause of the symptoms, particularly when symptoms were cumulative rather than acute. For example, a nurse doing an intense computer project began experiencing upper extremity and neck pain, but because she was very physically active outside of work—as a bicyclist and hiker—she questioned whether her work was the source of her worsening problems.

Even for nurses who were quick to diagnose and treat their injuries, there is a universal reticence to take up the ultimate diagnosis—disabled. Nurses who experienced physical limitations or restricted activities at work and home were unwilling to accept the concept of being disabled, even temporarily. One clinic nurse, who reported her injury to employee health at the end of her shift, rather than when it happened, refused the offer of time off because she had figured out a way of modifying her work to accommodate her self-imposed restrictions:

> I told them well, that’s okay, I just go work and they said, “Okay. Do you really want to go back?” They offered me some day offs. [But] staffing

> was so short…I feel kind of like, I don't want to do that because you know I could come in and modify my job so that's what I did.

Help or Hindrance: Interactions with the Compensation System

Like other workers, injured nurses are entitled to benefits for work injuries under the no-fault system of workers' compensation, and injuries are sometimes investigated to determine entitlement. When strategies for evaluating the legitimacy of claims for compensation benefits are imposed on nurses who identify what they do as a *calling* or *career*, being questioned by an outside authority unfamiliar with the nurses' philosophy of work is experienced as a challenge to her integrity and honesty:

> Yeah, somebody came in here and interviewed me! I don't know about other people because I haven't even talked about it but I just feel like…man, I mean, I'm not lying about my injury. If I was…and if I was that lazy, why would I have come back to work?

Therefore, the fact that the nurse's claim was investigated, while she was struggling to maintain her work pace, not only made no sense to her, but it also threatened her integrity while causing her public shame and embarrassment. She did not consider herself a person who exaggerated her situation. As a sign of her integrity, she did not discuss her personal issues with her co-workers or draw attention to herself by talking to others about her injury. Yet she was given the impression by an authority figure, capable of deciding the credibility of her claim for the purpose of awarding or denying her benefits, that she was making an inaccurate or false claim. Her perception was that if she *was* to do such a thing, why would she be struggling so hard to do her work at the same time? It is illogical. When probed further to give her overall impression of the workers' compensation system, she said:

> Oh God! It really is…Oh God. You have to fight for things that the doctor ordered…Yeah! And this woman [claims person], I don't remember her

> name, when my doctor ordered something for me, she said, "Okay, we'll do it if it's less than a $100." I said, "If it's a $101 you're not going to pay for it!?" You know, it was that kind of fight about everything. And when I got physical therapy they would only approve certain kinds of people. You know, I knew one [PT] was better because they really do a good job. But they won't okay it. Those kinds of things and then they could change people all the time [claims people].

Another described her encounter with the system as something to be avoided:

> I think it is horrifying! Maybe if I had a really bad injury and could not work, I would apply for benefits, but only if I really could not work anymore.

Another way nurses cope with the scrutiny they feel after reporting an injury to employee health, which was a covered benefit of the workers' compensation system, is to seek treatment outside the system—either by obtaining care through their private health insurance or by paying for services out of pocket—to supplement the basic care that is covered. Many nurses reported paying for private disability insurance that they use instead of—or as a supplement to—their employer paid workers' compensation coverage. Paying for this additional policy allows them the luxury of avoiding the compensation system and maintaining control over their care:

> I assume that you can get all your medical care covered in regards to that injury. I assume that they must have to, but I don't know. I really don't know, like what rights I have. I mean I have my own private disability and that's what I used…

> Actually I didn't have a bad experience after the injury, because I have disability insurance.

Nurses were not immune to bias toward co-workers who received workers' compensation, even if they had received care from employee health that they generally did not understand to be part of the workers' compensation system. In fact, in some cases,

nurses used their medical knowledge to either validate or diminish the injury of their co-worker:

> There was an LVN who claimed that she had an injury in job, but we didn't think that was true … she wasn't that honest about her injury… she just wanted to get workers' comp. She fell off a chair, you know, and she was huge. She's stretched her right arm in the fall. Then later on we heard that it was her left side. I said that if she fell on her right side, how come her injury is on the left? She wasn't honest….

Most nurses had a fragmented understanding of the workers' compensation benefits available to them. The premise of compensation benefits was generally consistent among the participants who believed covered benefits were paid when a work injury occurred. The exact benefits often were unknown but most believed benefits included medical treatment and salary continuance or supplement, if unable to work, as evidenced by the following: "I think they give you your salary and medical care."

Few had any interest in being involved with the system or learning about it. Often the understanding they had acquired was from their own limited experiences or observations of their co-workers' experiences. When specifically asked, no one could recall a member of the hospital's management team sharing information about workers' compensation benefits with them, but some thought it was probably part of their new hire orientation. However, the understanding of the system that the nurses did have came through the 'grapevine' on the unit. Moreover, unless they had some experience of having to justify an injury to maintain benefits, they tended to have a skewed idea that compensation benefits were ongoing, without a system of checks and balances. This contributed to their suspicion that some people took advantage of the system: "Well, you get your regular pay, I don't know if it's limited, but I know some people have gone on restrictions for years. "

Even though nurses accessed employee health at least initially, overall they found ways to distance themselves from the compensation system, based on a perception that they could receive a better experience of treatment for their injury elsewhere.

The Hospital Work Climate: Where and How Nurses Work and How They are Injured

Participants reported working at their current hospital for many years (median = 18), and some worked in the same setting for their entire nursing career. When nurses described the circumstances of their injury, their responses included contextual descriptions of the workplace as if it was important to understand where they were injured to fully understand the circumstances of their injury. Therefore, work injury data are included with the work climate data. Hospital work climate data are organized by three categories: (1) co-worker relationships, (2) isolating and desensitizing environment, (3) and nurse-hospital identity. In general, whether participants worked in ICU, a medical-surgical unit, obstetrics, or a locked-down psychiatric unit, they all described their work setting as the unit within the hospital where they provided a technical and compassionate level of nursing care to the very ill, many times the critically ill and dying.

Co-worker Relationships: "You Can't Nurse Alone"

When asked about influence of cohesiveness among their nurse peers on the unit, most nurses felt the climate of camaraderie was a factor of the individual nurses rather than a management style. All participants felt there was a great deal of variety among different hospital units, and they reported that they were most comfortable with the familiarity of working on their own unit. Although the makeup of the staff on the unit

changed because of attrition and new hires, overall most reported current or past relationships with their co-workers as particularly close and supportive; they also credited this to their shared experiences of caring for patients in the setting:

> Because so many people have been injured, everybody's really good about helping. We at least have enough staff to help each other….People know that you can't nurse alone. I mean, it's impossible to nurse alone. And people are very cognizant of that.

They shared themselves with fellow nurses as exemplified by their physical and emotional support for each other. Their description of shared bonds expressed the awareness that by relying on each other, they could make it through:

> You know, you're in a stressful environment. You rely on the people you work with, and they know it. And they rely on you…you need each other. So you appreciate each other for what they give you and for what you give them and there's a sort of camaraderie. There's also the feeling that the experience is shared only amongst people you work with. I mean you can't communicate that to people who don't do the work. And so there's this sort of unspoken understanding that what you share, that brings you closer together with the people that you work with, that forms a tie that is very special.

> I mean people say the reason they stay here, because the work is so hard…is because of the people they work with.

One of the things that bonds nurses together is a shared feeling of working as if they were on a mission together. One nurse's description conveyed nurses as being in a battle zone together:

> I think it's a combination of things, people of like-mindedness, sort of a similar personality type. And the kind of people we work with…I mean sometimes there are people peeing in the hallways here! There's a little bit of a…this sounds awful, but I'm just going to say this, because I can't think of any way better to say it, but it's a bit of a *war-buddy* mentality.

The bonds nurse share extend beyond the hours they spend together on the unit. Several nurses described those on their unit as “family.” They look out for each other and nurture each other. Their descriptions convey the image of *nurses nursing nurses*:

> It's all sort of family. I mean, we're very close-knit group. For the most part, we get along great. Most of my friends are people I work with.

> The ICU is like my second family. I love to cook…love to cook… but I live alone so I always cook for the unit and bring it in.

In contrast, although many nurses gave credit to those they worked with for reciprocating productive co-worker relationships and sharing the workload, they were equally able to call to mind situations when the absence of such relationships made nursing difficult for them. Nurses know their work is hard. Their experience is that their work is made easier when they support each other. When nurses felt they were unable to ask for help, or when help was refused because co-worker injury illness or for whatever reason, nurses lost both physical and emotional support in their efforts to do “hard work”:

> You have to be able to perform 100%. Because it is up to you when you say no and when you say yes…and a lot of people say no when you ask them for help.

> I don’t usually ask for help because our unit is not really that cohesive in the way of helping out. You have to ask “Can you help me?” then they find a reason they can’t help. Some units are better…

One nurse described the age of co-workers in her unit as one third in their 30s, one third in their 40s, and the remainder in their 50s. Some nurses are considered less able to help with the physical demands of patient care because they are senior in age and not seen as being fully fit:

> The youngest nurse on our floor is 36 years old, the oldest is in her 60s—I hate to say it but she is forgetful when it comes to patient assessment skills.

Unable to rely on each other for help becomes an especially difficult work situation when nurses are working injured, many with reported injuries that are minimized or injuries that are kept hidden because of delayed or underreporting decisions. When nurses know of a co-worker's injury, effort is made to look to another co-worker who is better able to help:

> There are some people like my friend that I'm afraid of them having another injury, she is in a little bit of denial so I'm probably hyper aware to take care…and not let them help me.

She also recalled a time when her unit had many injured nurses who were *working wounded*; that is, working when less than fully able to do their own assignments. It was as if her co-worker's name tags could have been replaced with *do not disturb* signs to designate that they were unavailable to help:

> I've had those days where I've thought, Who hasn't had back surgery? Or who hasn't been recently hurt?" Or who can I ask who isn't pregnant? And I think…this isn't going to be good...

Her description of how difficult it can be to find a healthy co-worker when help is needed means nurses are left no choice but to continue during their 12-hour shift as they endeavor to provide the level of care for their patients, even when limited co-worker support forces them to "nurse alone":

> So the coworker element of nursing, I think, is a big factor in being able to do our job, and in the satisfaction. But even in just being able to do it and to be able to stick it out, 'cause it's tough work.

In addition to nurses who work when injured, the mix of regular and temporary nurses assigned to the unit was reported as another influence on the cohesiveness of the

hospital unit. It can be a challenge to develop relationships with co-workers who are not permanent members of the staff because of their regular turnover:

> Our unit has both travel nurses and per diem staff. Travelers work under contract only for like thirteen weeks then they go back to their home. Per diem are here throughout the years so can be here longer but don't have benefits. It's the travelers are the short term ones.

Traveler nurses work where a need exists for a designated time. Therefore, for obvious reasons, they are not seen as invested in the unit other than to do their work assignments. This poses a problem for regular staff nurses who have no say in who is assigned to their unit and are responsible for continually orienting newly assigned nurses. When newly assigned nurses are seen as not interested in becoming members of the team, regardless of whether they are competent in doing their patient care assignments, it can lead to a division between regular and temporary staff:

> The core staff will orient new staff travelers to our standards and our way of doing things, and basically… I feel like you're talking but they're not listening. I don't know… I always think the travelers they're not as invested so they kind of don't really care. They've been many places. They know the work. They're a nurse. They know how to do what they need to do. So they just kind of tune you out.

In addition to their availability status, short-term nurses do not always share equal collegial status with the regular staff. For example, although nurses reported that per diem and travel nurses were helpful and welcome on the unit, some of the regular staff nurses routinely assigned themselves the sickest patients, not the temporary staff. This practice of patient assignment was done to provide the best care for the patients; however, when the patient load is not fully shared by all members of the nursing team, it creates an impression of a hierarchy of skill level:

> Like for right now, for instance, right now there are a few travelers. Well, today it's good because we have more regular nurses…but let's say

> yesterday. Yesterday we had more travelers and less regular nurses and there is one critical patient. And I was the only one that can do the procedures he needed, so I had to take care of that patient. I had no choice.
>
> So it would make a difference if there were more regular people because I think those few senior core staff do take on a tremendous burden. You know they take a lot more responsibility.

This situation made the regular staff nurses all the more valuable to the workflow of the unit. In other words, as one nurse put it, when a regular staff nurse was injured or unable to work, it creates "a weakness in the structure of the unit." The weakened structure of the hospital unit means nurses, particularly those who are injured and knew they need to rely on others, less able to form cohesive work groups or develop meaningful co-worker relationships, and more likely to feel isolated as they endeavor to carry their workload.

For some nurses, the frustration they feel, from what they see as a growing number of new entry nurses with a different value of nursing, is so conflicting that some participants gave it as a reason why they considered leaving their job: "It's serious…I've thought of leaving, but I haven't formalized it yet."

Nurses described both support and challenges in their work related to personal interactions they had with co-workers within the hospital setting. Hospitals, of course, are places with many different members of the medical team. However, nurses are the largest single group and the group most responsible for providing the variety of tasks required as part of direct patient care.

Most participants described the need for physical and emotional support from their co-workers. Patient care involvs a variety of job tasks that call for visual assessment and counseling skills, expertise for highly technical biomedical procedures, as well as a

multitude of situations that call for the most rudimentary manual labor necessary to maneuver and care for patients who are unable to assist in their own care.

Isolation and Desensitization: More to Do Than Can Be Done

Many nurses describe their time at work as having more to do than could be done. They describe their work setting as ergonomically challenging with patient care rooms frequently jammed with so many machines around the bed that gaining access to the patient does not always allow the use of good body mechanics:

> The pumps are incredibly heavy. I think they weigh 40 pounds each. And we have to… you know, bend over untwist them from the pole then lift them up with our arms out extended. You know, so it's all very bad body mechanics and there's nothing really you could do to prevent that because the way the room is set up. You just can't sometimes do good body mechanics. You can't be close to the pump because of the rooms.

Although nurses work in a public setting, they actually experience a form of isolation related to their rotating shifts, varied and unpredictable staff changes, and a poor—if not totally absent—system of communication within and between units. In other words, those they work with were in equally demanding roles as caregivers in an urban trauma center. When these nurses looked around, they saw everyone else struggling equally hard to do their job under challenging circumstances, caring for patients who, of course, are worse off than themselves. For example, one consequence of the nurse's isolation was expressed by her sadness when she learned weeks after the fact that a co-worker had been replaced on the unit because of an injury. She felt if the co-worker had retired there would have been a party to honor her nursing contributions, but since she was off because of a work injury, she simply disappeared with little or no mention from others, particularly the unit management.

All nurses reported that hospital work was physically and emotionally difficult, complicated by needing to keep up with an endless stream of new and challenging medical technologies. They also described nursing as an occupation that required cooperation with others to reduce risks for staff and patients. Many nurses stated that they preferred to work the demands of 12-hour shifts so that they could have longer breaks between shifts. Yet, at the same time, they described their long work day as being so demanding that they felt taking a break would inhibit their ability to get their work done because of the high workload and limited staff coverage: “I would not take a break; because if I took a break, nothing would get done.”

Nurses also were desensitized because of their cumulative fatigue. Although nurses acknowledged they were allowed nearly 1 full hour off during their 12-hour shifts, finding the time for rest breaks was a challenge reported by nearly all nurses, regardless of what shift they worked, since they had to arrange coverage for their assigned patients before they could leave the unit. Many nurses report that they use their 1 hour in one block of time rather than breaking it up into shorter periods throughout their shift. Almost universally, nurses report that either they or their co-workers used this precious hour to sleep. However, finding a place for a respite break or nap is not easy. One nurse reports that her favorite place is the meditation room in the main hospital but it is not always open. She described sitting in the dim quiet room dozing off in the presence of other napping nurses and alongside grieving family members of patients. Another nurse reports that her co-workers go to their cars to sleep during their break “now that we have a parking place.” Another describes a common practice of napping nurses squeezed on a sofa in the break room. The 10 x 10-foot room, referred to as the greeting room, was

where more than 25 nurses on the unit kept lunches, coats, bags, and other personal belongings. The greeting room had a standard sized sofa, a refrigerator, and a round table with some chairs:

> It is common on nights to use our greeting room to sleep. Yeah even on the day shift they sleep there. And that's okay to do it. We have forty-five minutes to an hour max. But you know, of course, because space is limited, there is room for only two or three people, and you're not stretched out, it's more like being lined up in a fetal position so three will fit…its very strange.

The image of nurses trying to find a place to rest was one of many that participants provided that exemplified an environment where working conditions are particularly difficult and may be even shocking to an outsider to the hospital setting. However, nurses accept the conditions with little hesitation as a part of their practice environment, apparently unfamiliar that most college-educated workers do not work under such conditions. In some cases, nurses see the smallest improvement in their environment as being beneficial to them:

> I mean, well, we could have water but we couldn't have it near us. Do you know how difficult it is for me to be able to leave my bedside? We don't have a central monitoring system, so in order for me to leave the room, I have to have somebody else cover me. I try to think about drinking water every time I leave the bedside. For awhile it was no drinks at all but now, thank God, they let us have liquid containers if they're covered. If I don't have it sitting in front of me I will go all day without drinking water. That's not good for you and how much energy are you going to have when you're chronically dehydrated…you have to be consciously drinking water if you're running around working twelve hours. But the down side is that you have to go to the bathroom if you drink much. So intuitively…you decide we're not going to drink because you don't really want to be having to take breaks. So it's things like that on the unit.

Nurses report not only an awareness of the risks of their work setting, but they also concede that outsiders would have little idea of the conditions in which they

they work. The uniqueness of their work setting both serves to bind them together and illustrated another example of their desensitized isolation:

> I don't think…that anyone would really fully appreciate how badly injured you can get at work. You know, I'm not sure that, I mean, I'm not even sure that I fully appreciate that I could injure myself so badly that I would be out of a job. And I'm not sure anybody else would. I mean, I know intellectually that that's true, but I'm not sure anybody that's non- nursing, would because they don't know what I do. I mean even my mom and dad have really no idea what I do day-to-day. For all they know I sit at a computer all day long. I mean they really don't know.

When one nurse recalled her injury, she conveyed a belief that nurses who put forth the greatest effort to provide the highest level of care to their patients are at greater risk of injury than those who do not. Her injury occurred while trying to start an especially difficult IV in an agitated patient. She knew she could have asked for help but didn't: "Instead of like complaining right away to the doctor that I can't do it." She went on to acknowledge that her co-workers also risked their own safety for the needs of patients:

> You know there are others that give extra effort. And that's why the accidents happened. A lot of my co-workers have been injured doing things for the patient's sake…

As expected in a setting where workers are not sensitive to their own needs, the number of injuries was not reflective in lost time. One nurse, who was also a manager, described her setting as one where injury to nurses was "pretty frequent." However, as a measure of how injuries are common place—even routine in some settings—she went on to say that it was "pretty rare" that those nurses actually took time off from work because of their injuries.

Another nurse who had a prior unreported injury was very matter-of-fact in her description of how common the risk of injury was in her work setting. The hospital that

she describes as the “only place she would work” was a place where she and many of her co-workers experienced injuries:

> Then the next time I was injured…I was turning a bed down a hallway. It was one of the floor beds…they were kind of old and awkward and hard to push. I was turning the corner with the bed and that adjustment, that twist of my upper body and push with one arm and sort of pull with the other arm around the corner and I just had immediately have this… sort of… I mean… It really was sciatica but I just felt this shooting pain all the way down my back and my leg. We had a lot of injuries, I think at the time actually nine people were out for injuries and for several years in a row there were around that number going out it was really bad.

Acceptance as part of the status quo seemed to go with the territory for these hospital nurses surrounded by challenging patients in understaffed medical units and experiencing demanding work schedules and accompanying fatigue. Even in a unit where staff injuries were so common that they warranted a study of the possible risk factors, the nurses accept the reality that studying the problem did not necessarily mean changes would be made that would reduce their exposure:

> They found several issues. The beds were one. The pumps were another. They haven't been resolved, but it's supposedly in the works. You know, you have to go with a certain company and blah, blah, blah…bidding and people have to vote on it, and so it's just taking forever. And then the other problem I think was the computer. So it was really the three main things. I'm always very careful about typing. But I guess pushing the beds down the hall really did me in. Every once in a while now…it's still a problem.

Nurses are creative and have suggestions for simple ways to improve their work setting, but they display little hope that things would change for them. When asked how their work setting could be improved, it is surprising that the very first thing they suggest was not to hire more help. Instead, they suggest ways that would make their work easier by having a lift team on all shifts, not just the day shift. Many participants also want a place for exercise at work. Some speak of a feeling of hierarchy because doctors, who

also work long hours in the hospital, are afforded a private exercise area. Nurses who work in specialized hospital units disclose an acceptance of the situations that put hospital policy and patient needs above their own needs. However, when asked, they proposed adjustments that seemed reasonable and simple:

> Well, there's a gym at work, but we can't go. It's for the doctors! It's really the nursing staff… where everyone's physically working. I mean I get an hour break. I'd love to go to the gym. It's very hard to keep a good exercise schedule because who's is going to the gym at eight o'clock at night? I mean, I work for twelve hours. Now I'm just too exhausted after work, but if it was at work it would be a lot easier for me. I would be much more inclined to do it.

> You know, even if a certain time of the shift, the PA system would announce, stop what you're doing and take a stretch'… It would be a good reminder to stop and take a break –stretch and breath.

Ripple Effect: Changes in Family Roles after Injuries Occur

Following an injury, nurses reported that while they consciously strove to keep up with the demands of their workload, they often fell short of being able to do so at home. Their work injury requires them to shift responsibilities at home to other family members, when possible, or find other ways to accommodate the lingering consequences of their injury. One nurse who was working full time reports she had just been given a release from further medical care related to her injury. At the same time, she disclosed that she was unable to do her usual chores for her family:

> I tried to take it as easy as possible. For instance, yesterday it was getting sore, and today it's pretty sore. So you know…I don't carry heavy grocery bags. I don't carry heavy things. We…my family go out [for dinner]. Although I just saw the doctor last Friday and got discharged from treatment so I can do my full workload.

When asked to clarify if she was recovered from her injury, she added, "No, but I was in good shape last week so the doctor said I was discharged." She went on to state

that she would start getting massages for ongoing muscle pain by paying for the treatment out of pocket. Another nurse described how the consequences of her injury affected her family, including her young children and her husband, who had a long commute to work. Her reluctance to initially disclose how her family had to bear the burden of her injury was evidence of her shame in transferring her family role so that she could maintain her stamina for work. She was particularly shy about having her children carry the load:

> My husband had a long commute, about 1 hour each way, then he still had to take care of the kids because I could not do anything. And he came home, at six or seven o'clock. My kids were small but they had to help with the ironing and washing the dishes, they had to do it…my son was only 10 then.

Nurses discussed their injury experience and fear of further injury in two ways. First, they related their injury to their perception of self-identity and how job interruption or job loss because of injury affected their identity. Second, nurses described in detail the influences they attributed to the environment of their work setting, including institutional philosophy, physical structure, policies on how time was spent, work assignments and staffing, cumulative fatigue, and patient characteristics. These descriptions will be used as the descriptive base for developing a grounded theory of acquiring identity that motivates or obstructs hospital nurses to work after injury.

Part Two: A Grounded Theory to Explain Motivation and Obstacles to Work for the Injured Hospital Nurse

The purpose of this section is to propose a grounded theory of acquiring self-identity that explains motivation and obstacles to work for the injured hospital nurse. The

interview guide used in this study (see Appendix A) covered topics that were anticipated to be informative of the more subtle influences on motivation or obstacles to work after injury, rather than to obtain a verbatim list from participants. Although an effort was made to explore the same topics with each participant, this interview construction allowed nurses the latitude to describe a range of experiences and emotions that the topics provoked. Given the preceding descriptive narratives, it is evident that nurses had fewer things to say about their actual injury experience than they did about their motivation to be a nurse or the influences their setting had on their ability to work, particularly with regard to the frequency of injuries in these settings. In other words, analysis of motivational and obstructive factors to work for injured nurses is gained here through the nurses' descriptions of acquiring identity and how becoming injured influences their identity.

As indicated in the previous section, many codes were identified from the data during the process of open coding. This level of analysis moved from categorizing data to conceptualizating and theory development. Descriptions and linkages among categories were critical to grounding the developing theory within the narrative. Nonetheless, such linkages were sometimes subtle and not revealed until several different configurations of categories and subcategories were diagrammed.

Building Theory –Analysis Used to Identify Three Sub-Categories

In keeping with the tenets of grounded theory, analysis was conducted concurrently with data collection and continued through this project. Initially, open coding of the transcripts was performed. To allow the widest breadth of conceptual possibilities to emerge from the nurse's interviews, no effort was made to limit or

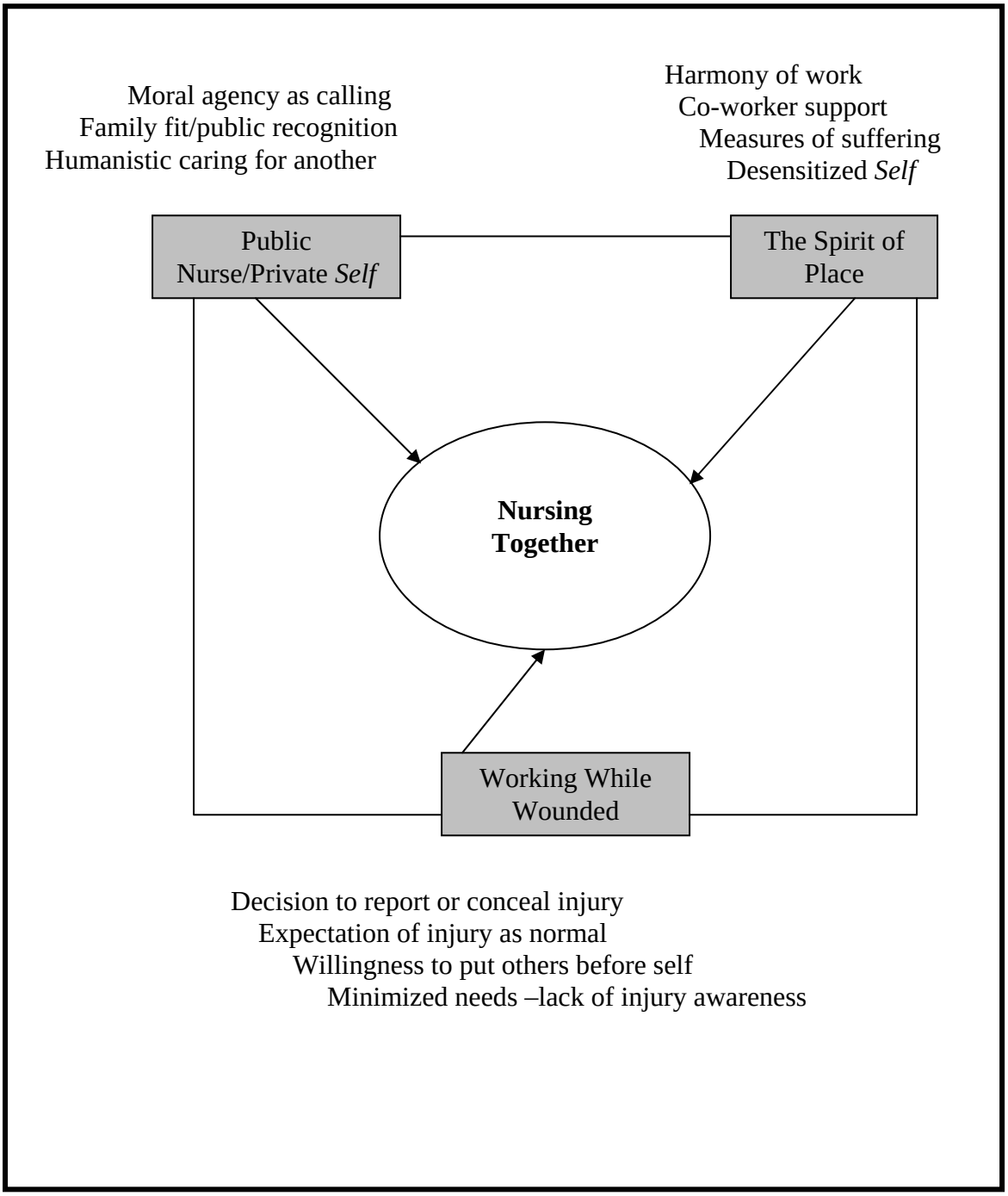
prioritize the open codes. During this stage, theoretical memos were written to allow this researcher to interact with and provide context for the early categories that were developing from the codes. Several memos were constructed around emerging themes, including identity, co-worker relationships, setting characteristics, workers' compensation, delay in reporting, and injury disclosure.

Overall, the participants described three major areas that impacted the process of acquiring *self*-identity: (1) nurse identity, (2) hospital setting, and (3) the injury experience. As these general categories became more evident from the coded interviews, axial coding was begun as a way of reassembling the codes, which allowed for further abstraction. Axial coding, which is an analytic tool of grounded theory, uses a methodological process, known as an explanatory matrix, to systematically explain a conceptual category using subcategories to describe context, conditions, process, and consequences of a primary category. Using this matrix, diagrams were configured to explain a category, thereby gaining an understanding of links and overlap of subcategories across the data. The explanatory matrix also allowed this researcher to visually connect or ground the category to the data by going back and forth between the data and the codes. In addition, analytic memos were written on each category as well as some of the subcategories. These memos helped the process of conceptual analysis by illuminating inaccurate linkages. For example, delayed or lack of injury reporting was initially considered a category for minimized self, acceptance of out-of-pocket expenses, and detachment from outside medical treatment. However, upon further analysis, it was eventually seen as a consequence of conceptual categories, depicting the nurse's identity, and injury experience, rather than an independent category.

Moving from concrete topics obtained from the interviews toward more abstract conceptualizations of meaning was heavily dependent on the process of axial coding as a way of recognizing patterns in the narratives. The process fleshed out consequences that are used to propose motivations and obstacles to work for injured nurses given the context and conditions in which they exist. The practice of axial coding was configured and reconfigured several times until finally this researcher was satisfied with the three conceptual categories that emerged from the data. The conceptual categories included *public nurse-private self*, *working while wounded*, and *the spirit of place.* These categories were considered the most important in explaining the process of acquiring *self*-identity after injury and its relationship to the nurse's motivation and obstacles to work. As a way to enhance credibility of the findings, outside assistance from an experienced grounded theorist and an independent research group were used to guide this stage of analysis.

A detailed explanation of the analytical process of conceptualization for each of the three sub-categories, and their relationship to the core category (see Figure 2) will be explained. The relationship between the three sub-categories is evident in similarities or in some cases redundancy of the consequences that motivate and obstruct work for injured nurses.

Figure 2. MORE Nurses Study –Conceptual Model: *Acquired Identity as Nurse*



Public Nurse-Private Self

Table 1. Axil Coding –Public Nurse-Private Self

Public Nurse-Private Self			
Context	Conditions	Processes	Consequences
Nursing as a public act Internalized as job, career, or calling *Calling* is a privately held motivation for caring	Work is a fit within family Nursing pride, high public esteem Considered an achievement of skill and caring	Being a nurse, internalizing public recognition Lacking disclosure of nursing as *calling* Evaluating co-workers based on shared philosophy of *calling* Asessing the risk/benefit of injury reporting, minimizing injury, refusing to jepordize identity	Delay or lack of injury reporting Lack of expectation of help from others Fear of injury and job loss Validation and legitimacy of *self* from others

Many examples from the interviews have been used to illustrate what *being* a nurse means to the participants in terms of personal satisfaction and professional recognition, which they internalized as identity. Most nurses talked fondly of a person or a life experience that motivated them to become nurses. Being a nurse was strongly associated with a family fit for many of the participants. The category *public nurse-private self* is used as a concept that expresses how the nurses take on identity and self-meaning from experiences involving interactions with family and friends and from the caring work itself. It captures both the public exercise of caring for others, and the private internalized motivations to *be* a nurse. One condition of this conceptualization is the experience of a family fit of nursing as work. Nursing then becomes a way to be

recognized within the family as well as a way of understanding other family members who are either nurses or health professionals. Nurses who expressed their emotional connection with mothers, aunts, and sisters gave particularly poignant examples of the family fit of nursing held for them.

Being a nurse was described as something different than being educated as a nurse. In fact, some nurses felt the essence of being a nurse could not be taught but was something one either had or did not have. In that way, it could be mentored or nurtured, but not taught. Yet, nurses were able to recognize this essence in others by the way they provided care, which was experienced in the close bonds they shared with many of their co-workers, whom they often referred to as "family members."

Although nurses obviously worked physically together on hospital units, when this deep connection was not present, co-worker relationships were more likely to be described functionally—as working side-by-side rather than having an intrinsic connection as nurses that was emotionally based. Nurses who felt their unit was not that "close" reported working together in a team, efficiently sharing their time and energy in order to complete work assignments. However, when they talked about their identity as a nurse, their shared descriptions of connectedness transcended function and became conceptual. In other words, they expressed a meaning linked to emotional bonds with other nurses with whom they sensed a personal philosophy of caring for others.

Another condition of the public persona of being a nurse was the reward from being publicly recognized for the work they did. There are many public images of nursing, from movies and television to print. In fact, the U.S. Postal Service even has a collection of images commemorating the profession of nursing on collectable postage

stamps. Participants shared with pride how important it was for them to be considered caring nurses. In addition, nursing was considered a service that was categorized by many in this study as a *calling. Calling* was used descriptively to express their emotional connection to the work, which every nurse recognized required science-based knowledge and technical skills. Nurses internalize public recognition of their skills, dedication, and work effort as positive self-esteem, which, in turn, motivates them to maintain work.

When nurses experience a disabiling injury, the consequences of the internalized conditions became potential obstacles to being able to maintain work. For example, when nurse identity was based on caring for others before oneself, they ignored it or did not recognize their own injury as being significant. This line of thought contributed to a delay or lack of injury reporting. The fact that nurses saw themselves as well-educated in medical assessment and treatment made underreporting all the more likely because they treated their own symptoms while continuing to work. Nurses who maintained a deep sense of self as being a nurse were reluctant to risk actions that would jeopardize their identity. This was seen in several participants who described a fear of job injury that could result in job interruption or job loss. Although all the nurses in this study were working, many knew of other dedicated nurses who could no longer physically perform bedside nursing. Fear for these injured nurses is also associated with an insult to their integrity as caring nurses, when the process of injury reporting resulted in feeling that their injury or symptoms were not legitimate.

Injured nurses are reluctant to report, and even more reluctant to take time off for their injury, and this is perhaps one of the most difficult obstacles to overcome because this practice creates an atmosphere where working with an injury perpetuates itself as

acceptable, if not honorable. The drive that motivates and inspires nurses to do what they consider meaningful work can become the very thing that inhibits them if they overextend themselves to the point where they cannot recover from current injuries.

Working While Wounded

Table 2. Axil Coding –Working While Wounded

Working While Wounded			
Context	Conditions	Processes	Consequences
Nursing is emotionally and physically laborious Everybody gets hurt Covered benefits come at a price	Injury is expected Many injured co-workers Medical skills can be used for self assessment and treatment of injuries	Working with pain Paying for out of pocket treatment expenses Deciding to report injury or not Injury awareness, failing to connect injury with work task	Nobody left to help Limited resources—co-workers are injured too Job loss—reassigned to other hospital duty without input Lack of control Stigma of disability Legitimacy of injury and integrity is questioned Altered family roles

"*Working while wounded"* is a conceptualization of the descriptions that participants shared about the consequences of their own experiences of injury, their co-workers' experiences, and the effects that injured nurses in the workplace have on other nurses who endeavor to provide care. The category is situated in a context where the work of nurses is emotionally and physically arduous, where injuries are so common as to be expected and unnoticed, and where finding healthy co-workers to provide needed

support can be an effort. The consequence is that there often can be too few healthy nurses to do the work. Undisclosed work injuries can impact working together on the unit because a nurse's withdrawal from being available to help co-workers can have negative ramifications for building and maintaining the bonds many nurses reported were desirable.

The process of *working while injured* is played out in the actions of nurses who, for various reasons, including stigma and perceived threats to job continuity, actively decided not to report their injury and either paid out-of-pocket for their treatment costs or submitted billing to their private health coverage. In addition, nurses are categorized as *working while wounded* when they were prematurely released to work without a full recovery. Many reported continuing with self-care treatment at their own cost. Nurses described altered family roles, dependence on their children for help with household tasks, pressure to continue work to maintain family income and benefits as motivations that explained their apparent willingness to work with their injury.

Nurses described their *wounds* as emotional from fatigue and lack of recognition in decision making as well as from physical injury. In addition, *working while wounded* depicts the fear held by all nurses of the likelihood of injury and consequences to the *self* and others should injury occur. Even though nurses in this study were working, it would be erroneous to believe *working while wounded* was not an obstacle to maintaining work for injured nurses. The obstacles to work for them were subtle and experienced over time and manifested in the cumulative effect on nurses' physical ability and their emotional strength to maintain enthusiasm for their work and to enrich their work environment as mentors and leaders.

Therefore, when injuries were expected, the practice of nurses working with injuries becames so pervasive as to influence the work climate, which created an obstacle much larger than encountered by any single nurse. The larger obstacle existed from the consequences of both injured and healthy nurses who become overburdened, disenchanted, and not able to achieve their goals as caring nurses both physically and emotionally.

The Spirit of Place

Table 3. Axil Coding –The Spirit of Place

The Spirit of Place			
Context	Conditions	Processes	Consequences
Hospital—institution of caring based on a foundation of public and social service to others Hospital is serving a greater good	24/7 and 12-hour shifts = cumulative fatigue Reflexivity is limited to workers in the setting Staff shortage More to do than can be done Work on the edge of life—birth to death	Minimizing self needs Associating place as an extention of self Adapting to continuing changes in hospital unit due to temporary staff Responding to bureaucratic rigidity Caring for others and caring for the hospital	Desensitized self needs compared to the needs of others Under reported injuries limits working together & makes needs more invisible Self-reward from caring for others

The third category, *the spirit of place,* describes the collective effects of the hospital setting—physically as a work setting, philosophically as the place where many workers share a mission of caring, and intellectually as a place that is held in high regard for providing the latest biomedical care to some of the most medically challenging and needy patients. *The spirit of place* is heavily influenced by the historical context of the

purpose of the hospital as a place of public service of caring for others who are ill and dying. It is closely aligned with the conditions and the consequences from the category of *public nurse-private self*. For example, nurses described being motivated by a perception of self-reward and privilege resulting from being skilled enough to provide patient care to the most disadvantaged and difficult patients in their medical community. At the same time, nurses minimized the many challenges they encounter from irregular staffing assignments, hospital policies that limited their flexibility and individual identity, and the rigor of patient demands. These challenges are complicated further by a physical environment where patient rooms, designed in an earlier era, are overflowing with equipment and monitors, and there are too few places for nurses to rest during their long shifts and frequent over-time demands.

When an injured nurse makes an injury public by reporting and accepting compensation services, these institutional challenges can become obstacles that impede the maintenance of work. For instance, nurses described many times when reporting their injury to management resulted in an experience that was more of a hindrance to their ability to maintain work than a help. Nurses reported conditions where their employer exercised influence by imposing light duty assignments that removed them from their usual unit and from patient care as an obstacle for them to maintain support and enthusiasm for work. On the other hand, nurses who were able to stay on their regular floor but for whom accommodations were made either formally by management, or informally through the support of their nurse co-workers by the way patients were assigned, for example, were motivated to continue working after their injury.

One of the conditions of *the spirit of place* is depicted by the 24/7 demands of patient care from highly dedicated nurses who take up a personal identity they associate with *place* as an extension of *self*. One consequence of their identity with *place* is that nurses became motivated by their work setting but risked minimizing their own needs for the needs of the patients and the institution with which they identified. Nurses seemed drawn by a force they feel for the hospital as the *place* where they developed their highly valued skills, and one where innovation and improvement continue to push them in the delivery of the latest methods in biomedicine. The consequences of this category are influenced by the nurses' lack of input on institutional policy and practices that they are expected to follow as contrasted by the one area in which nurses do have control, which is caring for their patients.

Perhaps the most pervasive consequence to the context and conditions of the conceptualization of *the spirit of place* was exemplified by the desensitization of nurses by a systematic process that placed institutional needs and patient needs first and individual needs second. This process results in nurses being resigned to work on hospital units where, although innovative staffing methods may result in sufficient numbers of nurses to care for the patients, there were instances where too few permanent nurses were invested enough to care for the workplace itself. This resulted in nurses who slowly became desensitized to their own needs as they became increasingly identified with the institution. The same environment that so many participants described as the "only place for them to work" also was the one they depicted as a place that required their constant vigilance, foregoing breaks and rest so that they could provide the high level of care that they were intrinsically motivated to provide to their patients.

Selective Coding: Moving Beyond Conceptual Codes

Finally, when there seemed to be agreement between the narratives and the conceptualizations of the major categories and their conditions, selective coding was conducted to push the theoretical context of the data further. This process was particularly challenging because the only real way to determine the central category of the data is to become deeply immersed in the text of the interviews, reading them over and over to decipher the real meaning of what is said or implied, and at the same time, going back and forth among various codes and always looking for core concepts. Just when it seemed that there was nothing further to be deciphered, that there may *not* be a conceptual theory in the study after all, a central category emerged very clearly from the words of one participant that resonated with all of the others.

Helpful to the process of conceptualization was memo writing on category topics or even memo writing on the analytical process itself. Almost any form of writing was helpful to move thoughts out of this researcher's mind onto the paper where they could be fleshed out and examined. These memos were extremely useful in bringing forward the interaction between this researcher and the volume of data. Also, working with a small group of other qualitative researchers helped a great deal to get outside perspective on the emerging meanings from the data.

Motivations and Obstacles to Working after Injury

The nurses in this study gave several examples of beliefs and events that either motivated them to maintain their work or became an obstacle to work after their injury. The examples (see Table 4) fall into categories that are personal, organizational, environmental, or related to particular aspects of the workers' compensation system.

Personal circumstances involved identity and the consequences of not having a shared identity with others. Economic factors included the personal expenses incurred with workers' compensation that did not cover costs. The organization of nurse's work with long shift and probable long gaps between shifts, and environmental issues of fatigue, and lack of self-care models in the hospital setting have multiple contributions. Stigma associated with the workers' compensation system did not seem to outweigh the highly qualified occupational health staff available to hospital nurses; therefore, they did not readily access employee health.

Table 4. Categories of Motivations and Obstacles to Work for Nurses after Injury

Category	Motivations to maintain work	Obstacles to maintain work
Personal	Internalized meaning of being a nurse as identity Desire to care for others Maintain a social and family role Resourcefulness in self assessment and treatment of injury symptoms, and using outside medical support systems Desire to support other staff members	Situations that inhibit or infringe on strong co-worker relationships—working with others who are perceived as not sharing a philosophy of caring. Lack of acceptance of the accommodations that impede personal meaning of being a nurse Fear of re-injury and job loss
Economic	Primary source of income and benefits for self/family Ability to pay for needed care out-of-pocket or with private disability insurance If not primary income, then one that contributes to the quality of life and family goals – education and activities for children	Paying for out of pocket expenses, including help with home tasks at home Using sick leave as injury recovery time rather than workers' compensation time off
Organizational	Longer gaps between work schedules when working due to 12 hours shifts Some flexibility to informally modify one's workload to accommodate reduced ability for full duty Being allowed to sleep at work Unspoken acceptance of working while injured	Light duty assignments that remove nurse from a supportive setting to demeaning clerical non-patient care work setting 12+ hours shifts; staffing with temporary nurses leading to uneven distribution of patient load and unit responsibilities such as staff training Lack of available lift team
Environmental	Acceptable practice of sleeping at work during break time Work environment is endemic with staff at all levels that are overworked so there are few models for "self care"	Lack of rest or respite facility to accommodate long work hours Lack of on-site exercise facility Physical layout of patient rooms that are old and unable to accommodate the equipment to enable the use of good ergonomics
Workers' compensation	Coverage available through well staffed and experienced on-site employee health clinic Fear of loss of integrity	Stigma –challenges to integrity Restrictions on length, type of care, and costs of care Lack of control over provider selection Unfamiliarity with covered benefits make them seem arbitrary and limit disability planning

Arriving at a Central Conceptual Category

In grounded theory, all salient concepts have the potential of being considered central or core (Strauss & Corbin, 1998). The process of continual analysis allows the discovery of the concept that organizes the matrix in a way that provides the most fruitful explanation of the data to be identified. With further abstraction of the sub-categories, a central category emerged as descriptive of the best fit for the conceptualization of identity that would explain the motivations and obstacles to work for injured nurses. *Nursing together*, as a central category, conceptually depicts the contextual setting in which nurses do their work, as well as the personal and public identity that draws them to their work.

When injury occurs, it is the desire to *nurse together* that is most at risk and, therefore, what facilitates an understanding of nurses' motivations and obstacles to maintain work. This phrase came verbatim from one of the participants. It also is reflected in all of the other interviews as participants described the identity shared by nurses who strive to provide the highest level of caring to their patients and care for each other in the process.

Nursing together is conceptually and functionally different than "working together" as nurses in a hospital setting. The participants in this study gave multiple examples of ways in which they identified with their co-workers and family members regardless of whether they physically work together, as well as ways nurses work next to each other but do not feel a connection they experience as *nursing together.*

The original aims of this study, which were to: 1) describe the meaning and impact on the injured nurse's life, 2) understand the influences of work climate on the

nurse's experience, and 3) identify motivations and obstacles to maintaining work after injury, are achieved by understanding the central conceptual category along with the sub-categories. The conceptualizations of *place* and *identity* provide an understanding of the experience of injury, which is not fully implicit simply by the nurse's description of being injured. It is by recognizing the acts of nursing as multidimensional—that is, physical, emotional, and situational—that *nursing together* becomes understood as a source of motivation to work regardless of recovery status. Institutional threats to *nursing together* for injured nurses include injury policies that limit input from nurses on meaningful and appropriate light duty work assignments and sufficient permanent staff to distribute the burden of administrative responsibilities, such as mentoring and training, while maintaining demands for patient care. The disabled nurse's newly acquired and unfamiliar role of needing care rather than giving care is a threat to *identity* when injured nurses are not able to *nurse together*. How these threats may be addressed by occupational health nurses who strive to provide care for injured nurses will be addressed in the discussion section.

Integration: Emergence of Theory Grounded in the Data

In grounded theory, concepts that reach the level of *category* are abstractions or conceptualizations of the group's story (Strauss & Corbin, 1998). The three sub-categories here were derived by comparing data from multiple individual nurses and are reflective of all nurses in the study. A technique used for conceptual analysis to aid integration was an exercise of writing a storyline about the research to see the central category of the data. The descriptive story of the uniqueness of nurses' work settings, and the concepts of *calling* and family fit, became evidence of an internalized drive for the

nurses. It also explains how and why the nurses persevered with their work after injury. The central story line of *nursing together* was drawn directly from the three sub-categories, *public nurse-private self, working while wounded,* and *the spirit of place*. Although it is a verbatim phrase used by one participant and was a theme of the importance of *place* and *identity* on the injury experience that was reflected by all the others, it was not until completion of the writing exercise that *nursing together* emerged as a clear description of the process of acquiring identity that motivates nurses to minimize their own needs and maintain their work after injury.

Observing the interdependence of the three conceptual categories of *public nurse-private self, working while wounded,* and *the spirit of place* offers an understanding of the nurse's motivational actions subsequent to injury. The degree to which injured nurses are able to *nurse together* is dependent on the nurse's interactions within and from the work setting; the acquired identity after injury; and the direct experience of injury such as care and benefits provided. These interactions then serve as sources of motivation or obstacles for nurses with both reported and unreported injuries. For example, a nurse who perceived nursing as a *calling* felt ostracized by the experience of reporting an injury. When she had a subsequent injury, she began a process of self-assessment and treatment to maintain control over disclosing the second injury, ultimately deciding it was best for her to continue working while hiding the fact that she had been injured. In other words, this nurse, who holds an existential view of *self* based on a deeply held internalized belief of putting others before *self,* experienced the external controls of the workers' compensation system as neither helpful nor relevant. Persistence by hospital authorities to comply with the compensation system, which generally removed nurses from

opportunities to *nurse together*, became a threat to this nurse's legitimacy and integrity, an offense that caused additional emotional distress. By seeing the importance of *nursing together* as a primary source of motivation for nurses, factors that obstruct the bonds of nurses can be identified as hindrances to maintaining work.

The results of this study determined the grounded theory of acquiring identity that motivates or obstructs nurses to work after injury as that of *nursing together.* The injured nurses identified the consequences of job loss or interruption as being disconnected from their need to *nurse together* and as a way of identifying with other nurses and family members with whom they share their identity. Hospitals are clearly places where many nurses work and where nurses described situations where they survive and even thrive in physically and emotionally challenging situations when they are provided opportunities that support them to maintain bonds experienced when *nursing together*. This theory is based on this researcher's adherence to the grounded theory methodology, particularly becoming deeply immersed in the coding process, while maintaining a degree of closeness to the data so as not to lose sight of the requirement to keep emerging concepts and categories grounded in the data themselves. As a result of the integrative process between the data, the progressive conceptualization of concepts and categories, along with outside guidance with analysis, sufficient adherence to the methodology has been achieved to support the grounded theory. The three conceptual sub-categories, *public nurse-private self, working while wounded,* and *the spirit of place,* are support for *nursing together* as the primary category. This explains how nurses acquire and experience a self-identity that motivates or obstructs work after injury. In every case, nurses expressed a desire to *nurse together* as a way of making their challenging work manageable, more

fulfilling, and to improve their ability to provide optimum patient care. Ultimately, participants depicted *nursing together* as a central qualitative experience allowing them to be the kind of nurse of which they are proud.

CHAPTER FIVE: DISCUSSION

The study conclusions and theoretical significance will be presented in this final chapter. The findings will be viewed in relation to occupational health and other related research, which examines the experience of work injury and disability. As is traditional in grounded theory, a review of the research specific to the emerging categories and theory took place following data collection and early analysis. Simply situating these findings within the body of research included in the review of the literature of the injured worker's experience would leave out important connections this study makes with the body of research specific to hospital nurses.

Limitations of this study, particularly sample size and design, will be discussed. Ways in which these finding may be useful for occupational health nurses who work in hospital employee health departments will be presented. Important points that add to existing nursing research and implications for additional work will be set forth.

Findings and Study Conclusions

This study gave hospital nurses an opportunity to tell their story of what the experience of work injury was like for them, their co-workers, and their families. Each nurse described the experience within the context of the hospital setting. They also spoke of the importance of the acquired identity they share as nurses and how that identity influences their efforts within the work environment and their injury experience. Three sub-categories emerged from their narratives that depict the central category of *nursing together: public nurse/private self, working while wounded,* and *the spirit of place.*

Public-Nurse/Private Self: The Meaning and Identity of Nursing

The nurses in this study described a connection to significant others in their lives—usually family members—who were nurses. This experience of work as a family fit led to a shared identity within family and community. Each nurse recognized the profession as having high public regard for their professional knowledge and decisionmaking skills, but perhaps most for the caring work that nurses provide to others.

In addition to the public identity nurses described, they shared a privately held identity of *self* that they expressed as the essence of being a nurse. Most participants struggled for the right words to describe this private identity, using words such as privilege, passion, religion, spiritual, and God's work to articulate their belief that nursing is a *calling* not a *job.*

It was evident in the interview process that, although nurses carry this passion with them, as an intention of the work they do, they seldom verbalize it to others. Co-workers who are perceived as seeing nursing as a *job* are not only considered not to be good nurses, but they also are seen as being emotionally or even physically unavailable to *nurse together*, as well as being a potential risk to co-worker and patient safety. Yet, paradoxically, nurses who identify with work as a *calling* may too be at risk of injury since they repeatedly minimize the risk of injury and, in particular, overextend themselves physically in order to carry out their patient care assignments. And when injury does occur, they often assess and treat their symptoms rather than applying for workers' compensation benefits.

The primary finding is that an internalized self-identity of nurses comes from a source that can be identified as important connections that motivate them to do the work. Hospital nurses then seek out others with a similar identity as those with whom they can

nurse together to maintain the motivation to provide the standard of caring they set for themselves.

Working While Wounded: The Injury and Consequences

Two of the most remarkable findings in this category were the frequency of injuries that nurses experience in their daily routine and that the vast majority of them are not reported. Obviously, then, many nurses work with some degree of injury, which is something that has both personal and workplace consequences.

Many nurses describe details of work injury reporting as being so unpleasant that they vow to only report another injury in the most serious situation. Instead, nurses reported paying for medical care, including assistive devices, over-the-counter medications, and help at home, so they could maintain their work, using out-of-pocket funds or private insurance that they pay for themselves.

Several nurses recounted experiences with light duty assignments that were more troublesome than helpful. In particular, nurses whose light duty assignment meant re-assignment to a different unit to provide clerical support found the assignment demeaning and, for those with an upper extremity injury, physically inappropriate given their limitations.

While working with their injuries, many nurses provided at least some level of self-care even with reported injuries. All nurses who reported their injuries accessed employee health, as part of the workers' compensation system, for initial treatment and follow-up. However, whenever possible, nurses who needed more than short-term follow-up sought treatment from their private medical provider, lacking confidence in the

compensation system. Nearly all the nurses in this study reported feeling stigmatized and disregarded by the system.

Many nurses minimize their own needs while working wounded. Because of their detachment from their own needs, it is not until they are away from caring for patients that they associate their symptoms as resulting from work. This was even true when the symptoms were so significant as to raise fear that one's ability to continue work may be threatened. As one nurse put it, "I thought my career was over." Instead, the nurses took advantage of a gap in their work schedule to rest and use over-the-counter medication to treat what they understood to be "just a strain." This illustrates how significant even an unreported injury can be as a reality check for many nurses who consider themselves "just an injury away" from being unable to do bedside nursing. It also illuminates the constant, yet often unconscious fear, that hospital nurses carry regarding the significant consequences a work injury can bring from not only their own experience, but also from observing career-ending injuries in co-workers.

Following their injury, participants seemed embarrassed by what they described as a role shift at home; they were able to carry on with their work assignments, but they had to rely on their children to do household tasks for which they had previously been responsible.

The Spirit of Place: The Hospital Setting

All of the hospital nurses interviewed worked in a public hospital dedicated to providing care to the underserved and often the most medically challenged patients in their community. In fact, the nurses here credit their current setting as being the place that they *became* the kind of nurse they are proud to be: highly skilled, flexible, and

decisionmakers. It is in this setting that they acquire their identity as nurses and where they experience the difficulties when they are left to nurse alone and beside others who do not share their ideology of patient caring.

Along with their claims of *place* as a contributing factor in their caring endeavor of caring, these nurses made no secret of the difficulties they experienced from the setting. However, the matter-of-fact manner in which nurses discussed their workplace demands was taken as indicative of their lack of awareness to expect anything different. One area of difficulty reported is the fatigue nurses deal from their prolonged work schedules and the physical labor of patient care. The practice of sleeping during their shift was so common and pervasive throughout the units that it was considered an accepted part of hospital policy regardless of whether it was approved by administration. The fact that multiple nurses gave examples without hesitation was not taken as an example of their pride in discovering creative places to relieve their fatigue, but as a sign that they had no idea that sleeping at work was actually not a common practice in the majority of workplaces. Strangely, nurses accept these conditions as commonplace just as they accept risk of injury as part of the hospital work climate.

Hospital nurses work in a setting in which they are the majority of patient care providers, but often have limited control over their work flow due to the need to coordinate with other members of the medical team. To an outsider, nurses may be observed to work in a quasi-military environment with doctors' *orders* and regulated *uniforms*, which leaves little opportunity for individualization of their work or their person.

Nurses described hospitals as bureaucratic institutions that make implementing change difficult.

Perhaps the most complex issue related to the nurses' work climate involved nurse staffing. Nurses reported an array of solutions that management has used to alleviate the nursing shortage. Unfortunately, the solutions have reportedly created additional problems.

Summary of Findings

Collectively these findings represent the spirit and investment of nurses within the context of the acute care hospital setting where physical demands are high, patient responsibilities are burdensome, and injuries are commonplace—if not expected. Although nurses verbalized many obstacles to work related to on-the-job injuries and the work climate, they endeavor to overcome them by seeking support and trusting relationships with nurse co-workers who share their identity as having a passion for their work. They are motivated by what they consider to be a privilege. Their passion for caring, which they claim as *calling,* is characteristic of nurses who have been drawn to nursing primarily by the desire to care for others. This often is both a family tradition and moral code. Because so many nurses experience injuries in their workplace, they are adept in finding ways to assess their own symptoms and find treatments that, at first glance, are seen as minimizing their need for care. However, a closer look reveals nurses *nursing* themselves.

Unfortunately, while the nurses credit the hospital as the "only place" they would work, they gave countless accounts of being required to minimize their personal needs for rest, respite from patient care demands, and job support. The reality of the hospital

setting, when evaluated objectively, reveals the hospital itself as the source the nurse's desensitization, brought on by isolation and the slow progressive cumulative trauma that results from their excessive job demands, staffing strains, and multiple injuries.

More than 7,500 hospitals nationwide employ 5.1 million people, and the majority of those are nurses (Census, 2005) Without question, injures to nurses are common in the hospital setting, a fact made worse by an aging workforce of nurses (AACN, 2007). Yet regardless of how common injuries are, even one injured nurse on the unit can pose serious consequences to the work climate because of the strong motivation nurses have to *nurse together* physically and emotionally to accomplish their work. When nurses work while injured, the fallout affects not only their own work, but it also affects the work of their co-workers. Injured nurses can be an obstacle to the physical and emotional connections that are experienced as *nursing together*. This is particularly true when injuries are hidden from others. When an injury is not disclosed, the injured nurse's reticence to help may be perceived as withholding help, which is viewed as an obstacle to *nursing together.* On the other hand, nurses described ways they *nurse together* emotionally by protecting each other and valuing their mutual skills of caring, even when a nurse co-worker is not fully able to do the work. Yet, who is left to nurse with when several nurses are injured at once? It was repeatedly reported by participants that nurses are reluctant to take time off from work because of injury. For some, this is because they fail to recognize injury; for others, they expected to get by, somehow modifying their assignment themselves. All nurses felt there was more work to be done than they could actually do. By *nursing together* they recognized a shared identity that keeps them

engaged, motivated, and supported to a degree that actually helps them cope with difficulties rather distinguish their passion for work (Vinje & Mittelmark, 2007).

Theoretical Significance

The theoretical significance of the findings from this study is best understood by integrating them with the existing body of knowledge of occupational health and the experience of disability.

The nurses in this study gave voice to the existing occupational health research that describes the disruption in family roles, out-of-pocket expenses for care, fear and vulnerability of re-injury, and underreporting of work injuries as some of the personal and social consequences experienced by injured workers (Biddle et al., 1998; Dembe, 2001; Keogh et al., 2000; Morse et al., 1998; Pransky, Snyder, Dembe, & Himmelstein, 1999). In addition, there is a growing body of research that focuses on the relationship of injury and work climate for hospital nurses that has identified similar challenges as those expressed by participants in this study such as chronic fatigue, injury risk factors, and the effects of staffing with temporary nurses (Aiken, Clark, Sloane, Sochalski, & Silber, 2002; Clarke, Rockett, Sloane, & Aiken, 2002; Lipscomb, Trinkoff, Brady, & Geiger-Brown, 2004; Lipscomb, Trinkoff, Geiger-Brown, & Brady, 2002; Trinkoff, Geiger-Brown, Brady, Lipscomb, & Muntaner, 2006; Trinkoff, R. Le, J. Geiger-Brown, Lipscomb, & Lang, 2006). By providing hospital nurses an opportunity to describe their injury experience, this study has contributed to the existing science by proposing a new way of collectively understanding the personal, social, and environmental effects on the nurses' injury experience using the central conceptualization in this study, *nursing together,* to describe what motivates nurses to persevere with the rigors of their work

before and after injury. *Nursing together* is achieved through the integration of the sub-categories *public nurse/private self, working while wounded,* and *the spirit of place.* The connections these findings have with the relevant existing literature will be presented using the aims of the study, meaning and nurse identity, injury experience and co-worker relationships, and work climate.

Work Meaning and Nurse Identity

Nursing is recognized publicly but is experienced as one's internalized privately held *self*-identity. With its spiritual and secular roots, Florence Nightingale's call to social action is considered one of the most vivid symbols of nursing's long history of caring for others (Dossey, 2000). Nursing is a public act, in that care for others, particularly hospital care, where family and significant others are frequently present, is provided openly with little privacy for either the recipient or the provider of the care. Participants in this study expressed *awe* in their awareness of the preciousness of their role as nurses, frequently acknowledging it as a *privilege*. Given the common public opinion of the nursing profession as doing good and important work for others, it is not a surprise that the nurses in this study, as expressed in other studies as well, shared feelings of positive self-worth from *being* a nurse (Liaschenko & Peter, 2004; Vinje & Mittelmark, 2007).

Along with the public persona of caring, this study revealed how nurses hold nurse-caring as both a description and an evaluation of *self.* This conceptualization was repeatedly depicted in the participant's disclosure of identity as something that connects them to significant others in their life. As seen in other literature, often it was with family members who shared their depth of value, tradition, and meaning of work (Paine et al., 1967). The nurses described many accounts where sharing their common experiences

with family and nurse friends exemplified connections that were experienced among them as a shared identity. The participants vividly described emotional connections with mothers, sisters, and nurse co-workers as a source of inspiration and support to them throughout their work life. These nurses resonated experiences expressed by other workers: that it is not uncommon for work relationships, particularly with those with shared values and life experiences, and to develop deep bonds that aid in dealing with the demands of work and life circumstance (Francis, 1990).

Despite efforts to the contrary, all of the participants is this study were women, perhaps part becausely, of the 2.4 million nurses in the United States, 92% are women (Census, 2005). As with other studies, the nurses in this study presented a similar importance to the connectedness they have with one's co-workers as both a factor in job satisfaction and shared identity (Dugdill, 2000; Raatikainen, 1997). In fact, nurses who were less emotionally connected to their co-workers described their frustration when working with co-workers who do not share the identity of being committed to a quality of caring, which is held as their standard for being a good hospital nurse. Participant's used words like, "new nurses," "kids," "young nurses," or "career changers" for those new to nursing that described co-workers who they felt did not have a *calling* for the caring. This was viewed as lacking a level of competence. Many nurses felt this type of caring could be mentored if the novice nurse was receptive and veteran nurses were not too "burned out." Lindbert (2006) describes nurse competence as a factor of personal maturity and knowledge-based practice within an organizational climate that is conducive to mentoring new entry nurses. Competency in care giving then becomes another way of understanding

the findings described by nurses in this study and suggests a way of fostering the characteristics of an identity as *calling* in those new to nursing.

The literature addressing nursing ethics acknowledges nursing as an identity that is socially and historically situated as *calling* (Liaschenko & Peter, 2004), as did the participants in this study who voiced a feeling that their work had a deep personal meaning with altruistic dimensions. Their words revealed that nurse identity was not only what was on public display, but it was also what nurses hold as a very private sense of *self*. Some participates depicted their work as having a spiritual quality. Others described a humanistic mindfulness, as an intention of caring for others, and as they would like to be cared for themselves (Duldt, 1996). In such ways, the nurses saw themselves represented in their patients. In other words, the nurses described a shared identity with their patients different that than of their co-workers (Duldt, 2002). This private *self* as a nurse was a reflection of the personal connections that drew the participants to nursing. It was expressed as representative of the participant's personal philosophy of the intention of work, and it was a powerful source of motivation for them personally and professionally.

Nurses complete rigorous academic preparation in order to qualify for licensure examinations. On average, the nurses in this study had been licensed for nearly 25 years, and many had advanced degrees. However, in addition to their body of knowledge, many experienced a deep desire to serve in accordance with a moral code they describe as a *calling* (Liaschenko & Peter, 2004; Raatikainen, 1997). In a study aimed at clarifying the relationship between *calling* and knowledge, Raatikaine (1997) found that hospital nurses who identified their work as *calling* were committed to their profession, had good

knowledge of the holistic process of patient and family needs, and collaborated closely with like co-workers as a team. These same qualities were recognized by nurses in this study in themselves and the co-workers they considered to be good nurses.

Most nurses in this study set very high standards of patient caring for themselves, and they frequently minimized their own needs. They expressed a universal desire to put forth extra effort for their patients, with seemingly little consideration for themselves. In fact, nurses reported not even being aware they had sustained a work injury until after separating themselves from their workplace. As in other studies, frequently work assignments with long hours, few breaks, and high patient demands were taken in stride as part of the workplace and were unchallenged (Trinkoff, Gieger-Brown, Brady, Lipscomb, Muntaner, 2006). Nurses in this study did not specifically discuss burnout; however, their descriptions of being disconnected from their work demands are commonly reported as a consequence of nursing burnout (Vehey, Aiken, Sloane, Clark, Vargas, 2004). A recent study that examined how job engagement was connected to the health and functioning of nurses found that a high level of job engagement was attributed to the nurse's identity as *calling* to nursing, which was also associated with their strong sense of duty and high self-imposed standards of nurse-caring (Vinje & Mittelmark, 2007). Moreover, in that same study, when the nurses perceived situations where they had not lived up to their own strict standards of caring, they described their concept of *calling* to be their source of reflection and introspection. This led to positive coping rather than job burnout. These findings help to explain the reserve nurses accessed in this study, and to maintain their work when they are injured or disabled themselves.

In the interviews from this study, the nurse's identity as a private *self* was not evident until the participants were asked to describe their work in terms of *career, job,* or *calling* (Wrzesniewski et al., 1997). In doing so, the nurses seemed to come alive with descriptions of deeply held beliefs and values related to their work as if it was something the nurses had been waiting to discuss. Many nurses were very descriptive as they made efforts to make their internalized sense of *self* as nurse known in the interview. The depth and quality of their disclosures of identity as *calling* were both a surprise to this researcher and emotionally touching as their descriptions of an individualized *self* emerged from behind their uniforms, name badges, stethoscopes, and tired faces. For some nurses, *calling* was a difficult label to accept. One nurse even acknowledged that, although *calling* best expressed the meaning being a nurse had for her, she almost apologized for being "dated" by selecting it, as if aware that modern nursing is valued more for being highly technically, scientifically, and outcome-based, and she assumed it was impossible to be both modern and have a *calling*.

Although an important finding of this study is that nearly all of the nurses perceived their work as *calling*, it is equally important that the nurses were able to recognize and highly value that quality in their co-workers. In fact, they were drawn to it. Participants indicated that when their perception of *calling* was shared by their nurse co-workers, they felt harmony in the workplace. This enhanced patient care along with patient and worker safety. Similar to Raatikainen's (2007) work on nursing care and *calling*, nurses in this study reported being motivated by an identity they associated with *calling* to provide knowledge based care, which helped them persevere with their work in stressful situations. Participants who experienced injuries reported being able to continue

working when they precieved they were working as part of a team that shared a similar identity. At the same time, as in other studies on nursing turnover, participants reported that a lack of connectedness with nurse co-workers is a source of frustration that can result in attrition, with experienced nurses leaving the hospital (Gregory, Way, LeFort, Barrett, & Parfrey, 2007; Stone et al., 2007).

The Injury Experience and Workers' Compensation

Working while wounded describes the phenomenon of nurses pushing through their workload, while working with reported, or many times, with unreported injuries. This study found multiple examples of nurses who were working who had not fully recovered from their injuries. As described, there has been limited research investigating the worker's experience of job disruption and disability, particularly with regard to family and intimate relationships. Allard Dembe (2001) developed a conceptual framework to capture the social consequences of occupational injury, which encompass three groups affected by work disabilities: (1) those in the work environment, (2) family and friends, and (3) those in the extended community such as benefit providers and policy makers. The schema describes the social impact according to who is affected, how they are affected, where the effect takes place, and the type of effect. Recognition of the social consequences to those, other than the injured worker, provides a broad understanding of the reciprocal effect on the disabled worker, and it touches on many of the points made by the nurses in this study. By constructing a conceptual framework that is widely inclusive, Dembe (2001) provided a format for additional work that was considered in this study.

As found in several occupational studies, these nurses had been released to full duty by their occupational health medical provider but still had limitations with ADLs. Many also planned to pay for subsequent care out-of-pocket or with private disability policies (Keogh et al., 2000; Morse et al., 1998; Strunin & Boden, 2004).

Strikingly similar to findings of underreporting in other studies was the decision that many nurses chose to delay reporting their injury, while others described how they purposefully chose not to report their injury (Biddle et al., 1998; Shannon & Lowe, 2002). Many researchers that relied on reported cases cite underreporting as a weakness of their studies (Keogh et al., 2000; Morse et al., 1998; Pransky et al., 1999). Although there have been studies that have focused on determining reasons for underreporting (Biddle et al., 1998; Shannon & Lowe, 2002), the problem may be too complex to be generalized.

The California Institute of Industrial Relations has strived to bring to light issues of concern that individuals have had with the workers' compensation system. They found that those who are responsible for providing benefits, medical care, and access to benefits when a dispute arises all share in the negative experiences (Sum & Frank, 2001). In the MORE Nurses study, nurses reported difficulties similar to those who also found themselves engaged in the compensation process (Strunin & Boden, 2004). Of particular interest was the frequency in which most nurses used their medical knowledge to assess and treat their injuries or to supplement the medical care they received from occupational health providers, which many considered lacking. Some nurses recounted times when they intentionally minimized their injury rather than risk having to report to occupational health. Many nurses also provided details about being scrutinized and being made to feel

like a fraud after a reported injury. These feelings were similar to accounts reported by Strunin and Boden (2004). None of the nurses had favorable experiences with light duty assignments when it involved clerical duties rather than direct patient care, especially when it required relocation to an alternate location in the hospital. In such cases, nurses described being alienated from their co-worker support systems, which made working more difficult than what they felt they could have negotiated informally if they had been allowed to remain on their regular unit.

While much of occupational research is not specific to nurses, a group of nurse researchers at the University of Maryland have been prolific in their study of injury-related factors in nurses primarily focusing on work climate. In particular, one study adds to the body of research on injury reporting (Trinkoff et al., 2003) by examining nurses' inclination to report their injuries. Trinkoff et al. (2003) found that nurses were more likely to report an injury when they perceived concern from managers, had on-site health programs, and, perhaps most curiously, when they had standardized work assignments as part of the permanent team. The study conducted here focused on the consequences of *working while wounded,* rather than the cause of underreporting. Nonetheless, both hospitals in this study had highly trained occupational health professionals in well-established departments. Yet, in both hospitals, nurses were still reluctant to report their injuries to the employee health department. Their reasoning was more influenced by the need to avoid negative consequences, such as lack of medical control over medical care issues and dealing with an inflexible and impersonal workers' compensation system (Strunin & Boden, 2004; Sum & Frank, 2001), rather than embracing support from employee health (Trinkoff et al., 2003).

A subsequent study of nurses by Geiger-Brown, et al. (2004) used a survey with open-ended comments to explore the challenges faced by nurses. Comments from slightly more than 1,100 respondents fell into themes such as excessive work demands, injustice, and their own personal solutions to work environmental issues that they felt were threats to maintaining work.

The MORE Nurses study findings corroborated other sources that note the high number of injuries as being common in hospital nurses (Gillen, 2007; Trinkoff et al., 2006). The nurses described their injury experience within the context of their work climate and their personal meaning of nursing while minimizing the effect of a work injury on their life outside the hospital. Many nurses continue to work as they try to recover from injuries even when they are not able to maintain their chores at home. This is similar to the social and family consequences experienced by injured workers and their families presented in other studies (Keogh et al., 2000; Morse et al.,1998; Strunin & Boden, 2004).

It was anticipated that nurses injured on the job would have much to say about their direct experience of injury, perhaps even harbor fault for the injury. Yet many participants could not recall the specifics of their injury, and some actively expressed that they did not want to talk about the injury because it was an unpleasant experience in a number of ways (Strunin & Boden, 2004). The participants' reticence to give details of their injuries was initially considered a reflection of their predilection to focus on service to others. Yet with further analysis of the major categories and how they related to each other, it became evident that recollection of injury was more complicated than the concept of nurses who see their role as one of *doing for others.* By viewing the sub-

categories together, the hospital nurse's experience of injury can be understood both privately and publicly and in relation to the physical, emotional, financial, and ethical consequences of injury. When such nurses are restricted from their work because of a work injury, it causes a change in their privately held identity of *nurse*. There are several good reasons to focus additional research to understand changes that result from the injury phenomenon for hospital nurses, including the fact that they represent the largest number of hospital workers; experience the highest number of musculoskeletal injuries; and are in short supply nationally and internationally (AACN, 2007; Trinkoff, Lipscomb, Geiger-Brown, & Brady, 2002).

Many nurses interviewed for this study described having a fear of being seriously injured at work because injuries are so common. Also, they viewed work as continually arduous, even when they were able to avoid an individual episode of serious injury. One nurse who was 63 years old, and still doing patient care, described herself as being "too old to get injured," meaning that she felt her recovery would be difficult because of her age, should she suffer an injury. Yet, even nurses who were much younger in age gave multiple accounts of being afraid of "being just an injury away" from not being able to continue with their work. In this way, fear seemed to be its own hidden disability, something they seemed to try to keep at bay, not even wanting to talk about it in the interviews. Studies that focus on fear of pain and re-injury found that, if not addressed by skilled occupational health providers, such fear may itself become a disability (Gheldof, Vinck, Van de Bussche, et al., 2006; Roelofs, Goubert, Peters, Vlaeyne, & Crombez, 2004). Fear of re-injury is documented in the literature as a common consequence of

injured workers, as well as for those who have been released from medical treatment and thus considered fully able (Keogh, et al., 2000; Morse, et al., 1998).

Work Climate: Where and How Nurses Work

Research on the work climate of nurses portrays a setting where the hours are long, worker fatigue is pervasive, and the risk of injury is ever present and worsened by the workplace demands (Lipscomb et al., 2002; Trinkoff et al., 2006). The findings in this study suggest one factor of the injured nurses' perseverance to work after injury is the spirit of the setting itself. Participants clearly depict the settings as places founded on the moral agency of caring publicly for others in need and where care has become increasing complex with the rapid progress in biomedicine, a global nursing workforce, and administrative changes in philosophies of health care delivery. One characteristic of the work climate that every nurse in the study discussed was nurse staffing. Not simply the shortage of nurses, which is common knowledge, but how the recent staffing practices affect both patient care and the work climate in general. Participants described hospital units with less than desirable numbers of regular duty nurses compared with those on temporary assignment. Although studies have examined administrative methods of staffing solutions (Bard & Purnomo, 2006), they do not fully address the qualitative changes experienced by nurses who feel increasingly burdened by bearing the heaviest patient loads and the most responsibility for the integrity and cohesiveness of their units. All the while, these nurses work side-by-side with their short assignment co-workers who are highly paid and less encumbered as they provide patient care.

The work climate experienced by hospital nurses occurs within an encapsulated setting with co-workers and others outside of nursing, many of whom share a common

goal of providing service and care to the disabled, ill, and dying. Therefore, most, if not all, workers in these setting may share similar workplace demands. In that sense, it becomes difficult for nurses to objectively evaluate their workplace absent a comparison outside the hospital. This isolation results in a slow desensitization to the increase in physical and emotional demands that may have negative consequences to the very patients for whom nurses care (Aiken, Clarke & Sloane, 2002; Geiger-Brown, Trinkoff & Nielsen, 2004; Johnson & Lipscomb, 2006). The message nurses reported is that they are expected to put the care of others before the care of themselves—and they do. A recent study by Trinkoff, et al. (2006) reported that in a sample of 2,273 nurses, more than 25% reported working more than 12 hours per day, and nearly 25% worked more than 50 hours per week. These hours exceed the Institute of Medicine's recommendation (Trinkoff et al., 2006). Participants in this study described the demands of patient assignments and prolonged around-the-clock work hours as being made without discrimination to nearly all levels of caregivers within the hospital. The persistence of these demands over many years of service dulls the awareness of the hospital nurse, obstructing the perception that what is expected may come at an unacceptably high cost—the cost of one's own health and quality of life at home and work. Yet, nurses in this study revealed many occasions in which they not only endured, but they also thrived in the setting when they were able to *nurse together.*

The reflexive process of acquiring self-meaning provides a theoretical framework for understanding how this desensitization to self-needs occurs in the hospital setting (Blumer, 1969). Besides the work environment, a contribution to the reflexive meaning of *self* for the nurse, which cannot be overlooked, are the very patients they care for. It

goes without saying that nurses understand that patient needs are greater than their own, no matter what the hospital climate is like. Working long hours with ill and dying people for whom the nurse feels responsible may require denial of self-needs, even when it is intellectually understood that self-preservation of one's own physical and emotional health is at risk (Johnson & Lipscomb, 2006; Trinkoff et al., 2006). Yet, repeatedly in this study, nurses described ways they are motivated to do their work, regardless of the injuries they experienced, as long as they felt they were able to *nurse together.*

Evaluation Criteria

Grounded theory is evaluated by the adequacy of the research process and the grounding of the findings (Strauss & Corbin, 1998). In this study, the methodological processes of data collection, coding, memo writing, and analysis were maintained. Axial coding and diagramming were used to examine the context, conditions, process, and consequences of different categories until an agreement was reached regarding the three sub-categories. This introspective analysis was facilitated by feedback of an experienced grounded theorist as well as a group of peer researchers as a way of maintaining clarity and conformity with the methodology and the data. The sub-categories and the central category have been presented with favorable feedback to nurse researchers.

Limitations

A potential limitation of this study is the sample size, which was limited to 16 hospital nurses. One of the canons of qualitative research is that findings are not considered to have generalizability for other samples or different populations, which is an important evaluation criterion in quantitative studies. However, Strauss and Corbin (1998) maintain that the power of the science used here is intended to be theory building

and explanatory—rather than predictive—in lieu of the standard canon of generalizability as a measure of research. In so doing, the reader can judge the degree of explanation achieved by the theory and, therefore, its applicability to other similar groups.

Another limitation was in the sample selection. Ideally, theoretical sampling would have been preferred, but this was not possible in this sub-study design. Therefore, the convenience sample was intentionally selected as the best alternative to draw information from the widest possible sample given the design restrictions. Any influence by this researcher with regard to bias or prejudice would be an additional—though unintended—limitation.

Implications and Recommendations for Further Research

The findings in this study add to the body of research that has evaluated nurses in hospital settings. There is a growing body of science examining the effects of the work climate on patient safety; workplace injuries, including needle sticks and musculoskeletal injuries; and nursing burnout (Clarke, Sloane, & Aiken, 2002; Lipscomb et al., 2002; Rogers, Hwang, Scott, Aiken & Dingegs, 2004; Trinkoff et al., 2007; Trinkoff, Storr, & Lipscomb, 2001). However, this study demonstrated the importance of allowing nurses to use their own words to educate stakeholders who are responsible for maintaining the health and safety of skilled, caring nurses in hospitals.

In particular, the findings from this study reveal the deep identity nurses hold as a *calling*. When such nurses are confronted with policies and procedures common to the workers' compensation system, such as injury investigation, utilization review, and use of mandatory medical providers, they view it as an insult to their integrity as persons who have a high moral code. Given this finding, employee health personnel and hospital

supervisors would be well advised to acknowledge the nurse's commitment to her or his patients. These personnel should also recognize that facilitating ways that nurses can maintain their efforts to *nurse together* will help these nurses maintain their work as productive patient care providers. Although none of the nurses felt *calling* could be taught, many nurses felt that, under the right circumstances, senior nurses could mentor new nurses. For instance, mentoring could be structured in such a way as to reward senior nurses, who often bear the heaviest burden of patient assignments on hospital units. For example, mentor nurses may have the option of having flex time in their work schedule when their assignment load permits, or they may be given the option of attending an on site physical conditioning program during work hours.

Nurses are compelled to do their work based on their deep beliefs related to the importance of caring for another human being in need. This, of course, influences how and even where they work. The degree to which nurses are personally invested in the work of patient care influences how they connect with nurse co-workers. These connections are then essential in determining whether nurses will find ways to *nurse together* as an identity; *nurse together* as a consequence of injury; or *nurse together* in the exceedingly demanding and complex settings in which they provide patient care.

These finding are reflective of the nurses who were interviewed; however, they provoke curiosity on how other groups of nurses would respond. For instance, a series of similar studies could be conducted to provide breadth to these finding by including new, young and or male nurses, those with more recent injuries, or those working in different types of hospital settings. Research from such studies could expand and complement the findings that were touched on by this study. In addition in subsequent research, it would

be helpful to interview occupational health nurses in employee health departments. They could contribute to the understanding of the procedures in place for engaging health practices for nurses as well as for those that focus on medical evaluation, the treatment of injuries, and return-to-work policies.

Implications for Occupational Health Nurses in Hospital Employee Health

This study provides insight into the hospital nurses' experience of injury, which include factors related to the actual injury event, frequency of injuries in the hospital setting, and workplace consequences for nurses who work while injured. Occupational health nurses are highly skilled at recognizing the importance of healthy work environments and in promoting and maintaining health of workers. Since nurses are the largest group of hospital workers, and are in short supply, efforts to identify new ways of meeting the challenges of widespread injury in nurses, as well as nurse retention, offer opportunities to address the burden and expense that these conditions place on employers.

Based on the findings from this study, effort spent by occupational health nurses to identify ways that foster and encourage *nursing together* for all nurses would be very worthwhile, regardless of whether an injury has been reported or not, since nearly all nurses have either experienced an injury or have been impacted by co-workers' injuries. Organizing focus groups of nurses configured in a number of different ways, within and across departmental boundaries, with mixed groups of veteran and novice nurses may be a particularly useful method for occupational health departments to begin to assess the range of issues that would help nurses *nurse together.* An important benefit of focus groups would be their utility of fostering communication among different groups of nurses, such as those who see themselves as being technically oriented compared with

those who are trained in traditional ways of patient assessment. Such communication could promote teambuilding, but it also could be a way of promoting their recognition and appreciation of difference in nursing style. By being able to share their internalized identity of nursing, which has been determined in this study as something that nurses do not talk about easily but are more likely to judge based on actions, may help to make nursing units more cohesive and improve the dynamic of *nursing together*.

Another important issue for occupational health departments, which was derived from this study, is the number of unreported injuries in the hospital setting. This was further complicated by nurses who obtained care outside the employee health or workers' compensations systems. This phenomenon makes it is difficult for hospitals to fully comprehend the magnitude and consequences of nurse injuries. Identifying ways that reduce the stigma that nurses associated with occupational health, and ways of presenting it as a valuable benefit to all employees, may better serve the needs of workers.

The first way to promote occupational health as an attractive benefit is to educate workers—particularly nurses who are highly trained in medical assessment and treatment—that they have something to gain by taking advantage of employee health services. By discerning ways of promoting employee health as a benefit, and not as a burden to nurses, occupational health departments will be more likely to engage in proactive injury prevention strategies and less reactive to injury consequences. For example, occupational health should not be viewed simply as the place where one reports when one has an injury, which is the overall impression of some of the nurses in this study. Instead, occupational health nurses could use wellness-based interventions, such as routine screening and health promotion, as well as using some of the simple suggestions

mentioned by participants such as short breaks for guided relaxation and accessible exercise rooms that could be used in short sessions. In fact, recent studies assessing different work tasks, (Galinsky, Swanson, Sauter, Dunkin, Hurrell, & Schleifer, 2007; Faucett, Meyers, Miles, Janowitz, & Fathallah, 2007) found that additional short breaks minimized discomfort without affecting productivity.

Perhaps the most important lesson from this study, and the easiest to implement, is that nurses want and deserve recognition for the efforts, sacrifices, and conscious intent they bring to their work. Moreover, every employee health department that evaluates a nurse for a work-related injury can incorporate into their assessment a verbal acknowledgement that nurses efforts are recognized, appreciated, and highly valued—before interjecting any questions about the injury event itself. Such acknowledgement may go a long way to fostering self-esteem in nurses and acceptance of occupational health services as a collaborative event and one in which nurses' wellbeing becomes the most important concern.

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Appendix A
Interview Guide: Topic Prompts for Nurses –Cases

1) [Interviewer] This study is aimed at learning more about nurses who have been injured on the job. Before we talk aobut your injury, I'd like to learn about your as a nurse. So first I would like you to tell me about yourself.
-work history
-education & professional memberships
-family influences
-meaning of nursing to you: job/career/ calling & give me an example
2) Now I would like to learn about your injury experience. Tell me about your initial injury experience and how it progressed.
-when & how
-resonses of co-workers, supervisor
-medical treatment
-workers' compensation system
-give me an example of a specific event that describes your experience
3) Now I would like to lean about the effects of your injury on your life outside work. How would you describe the effects of your injury on your personal life?
-immedicate family
-family support
-shift of household chores
-social life & work friends
-change in hobbies & volunteer work
-self identity and self image
-give me an example of a specific situation that describes the impact on your life outside work
4) I am aware that most people who have work injuries go back to work whether or not they have fully recovered. One thing that interestes me is how your work environment might influence your being off work or your efforts to return to work.
-sources of support
-staffing
-light duty assignments
-continuing contacts with co-workers
-influence of others on return to work
-who deceided on the timing of your return to work
-give me an example of how your work setting impacted your return to work
5) Now I would like to know if you have worked with others nurses who have had a work injury. If yes…
-influence on your work load
-contact with injured co-worker
6) Is there anyting else about your experience of having a work injury or your effort to return to work that I have not asked that you think I should know?

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