

Pediatric Nurses' Grief Experience: Its Relationship with Burnout and Job Satisfaction

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DEDICATION

To my parents, Fatima and Zaki Adwan, and my brothers and sisters for their
encouragement, support, and prayers.

To my wife, Lisa, and my children Noor, Zaki, Hala, and Zain, for their love and support.

To all nurses who give everything and expect very little in return.

A PRELUDE

I Cry

By Susan J. Stowers (1983)¹

Today I saw a young man dying.
Today I saw a mother crying.

I felt the pain, that brought the blow,
That made this child of God feel low.

I thought, but for the grace of God go I,
And so tonight I sit and cry,

I cry for those who feel no hope.
I cry for those who cannot cope.

I cry for the family wondering why,
Their bright young son chose now to die.

I cry for my friends, who washed the blood from his hands,
Each one, a mother, held her own son's hand.

I cry for I realized as I washed his face,
I once desired to be in his place.

I cry for I saw the pain it created,
In everyone's eyes, as though all were related.

By the common bond of living and dying,
And so tonight I sit and I am crying.

For it is not often a person can see,
Another one dies as though it were he.

¹ Used with permission from Wolters Kluwer Health (Appendix 8)

ABSTRACT

The goal of this correlational study on 120 pediatric nurses was to examine relationships among grief experience following patients death, burnout, job satisfaction, and other environmental variables. Measurement used the Revised Grief Experience Inventory (RGEI), Maslach Burnout Inventory (MBI), Index of Work Satisfaction (IWS) and Demographic Information Form (DIF). Results showed grief to have significant correlations; positive with burnout, negative with job satisfaction. Some nurses tended to have significantly higher emotional exhaustion if more of their primary patients died and higher guilt if dying patients were younger. Conclusions suggest a dynamic interaction among grief, burnout, job satisfaction, and environmental variables where they interact and relate to nurses' intention to leave unit, organization, or nursing. Recommendations for practice call for grief intervention and education programs. Recommended future research includes RGEI instrument refinement, evaluation of grief intervention and education programs and their impact on burnout and job satisfaction as outcome variables.

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LIST OF ABBREVIATIONS

Term	Abbreviation
Agency for Healthcare Research and Quality	AHRQ
Bone Marrow Transplant	BMT
Certified Nursing Assistant	CNA
Demographic Information Form	DIF
Float Pool	FP
Hematology Oncology	Heme/Onc
The Index of Work Satisfaction	IWS
IWS Autonomy subscale	IWS-Au
IWS Interaction subscale	IWS-Int
IWS Organizational Policy subscale	IWS-OP
IWS Pay subscale	IWS-Pay
IWS Professional Status subscale	IWS-PS
IWS Task Requirements subscale	IWS-TR
The Maslach Burnout Inventory	MBI
MBI-Depersonalization subscale	MBI-DP
MBI Emotional Exhaustion subscale	MBI-EE
MBI Personal Accomplishment subscale	MBI-PA
Mean	\bar{x}
Medical Record	MR
Pediatric Intensive Care Unit	PICU
Patient	Pt.
The Revised Grief Experience Inventory	RGEI
RGEI Depression subscale	RGEI-Dep
RGEI Existential Tension subscale	RGEI-ET
RGEI Guilt subscale	RGEI-Glt
RGEI Physical Distress subscale	RGEI-PD
Registered Nurse	RN
University of Minnesota <i>Amplatz</i> Children's Hospital	UMACH
Year	Yr

CHAPTER 1

INTRODUCTION

Background and Significance

By the nature of their role, nurses are on the frontlines of caring for patients of all ages and conditions. In pediatric settings, nurses have unique caring roles because of the vulnerable and intensive nature of their patient populations and the special bonds that can form especially when caring for patients and their families lasts for long periods of time (Scott, 1994). A wide range of acute and life-limiting childhood illnesses—cardiac, pulmonary, renal, metabolic, hematological, and oncological in nature—requires these young patients and their families to visit in-patient as well as out-patient settings more frequently and stay for longer periods of times than other patients with less complex conditions. This in turn may expose nurses to more intense and recurrent experiences with loss and grief (Rashotte, Fothergill-Bourbonnais, & Chamberlain, 1997). In many cases, nurses watch their patients grow and reach their developmental milestones. Just like a family member or a close relative, the nurse is closely involved in the child's care and wellbeing as well as routine daily activities. This special nurse-patient relationship becomes stronger through repeated interactions and care-giving (Scott, 1994) and at times of ups and downs patients and their families experience throughout the course of the child's hospitalization.

Pediatric nurses are the focus of this study for several reasons. First of all, the researcher's primary field is pediatric nursing and as such the author is interested in phenomenon occurring in pediatric nursing. In addition to personal interest, and probably

more importantly, the current literature sheds light on areas that emphasize the researcher's interest. Zander & Hutton (2009) conducted a thematic review study on working and coping with pediatric oncology population, in which they concluded that pediatric oncology nurses are at a high risk for being exposed to stressors associated to this setting. The authors suggested a model for coping with working in a highly stressful environment such as pediatric oncology. Another strong incentive to focus on pediatric nurses as a target population is the visible evidence of attachments that develop between nurses and their pediatric patients especially as nurses repeatedly care for this young population (Stowers, 1983) and (Scott, 1994).

Since nursing is a helping profession that provides care for individuals, families, and communities during times of wellness and times of distress and illness, it is no surprise to nurses to live through and battle feelings of grief, sadness, stress and unresolved loss (Couden, 2002) when one of their patients suffers from a severe illness or dies. Rushton (2004) indicated that health professionals may suffer and experience pain as they witness the pain and suffering of their patients and families. Others argued that the exposure to patients' suffering and death can render the nurse prone to stress and burnout (Hammer, Nichols, Armstrong, & Rose, 1992); (Kennedy, 2005); (Rashotte et al., 1997); (Gerow, Conejo, Alonzo, Davis, Rodgers, & Domain, 2009) and (Spencer, 1994). As first line caregivers, nurses could suffer due to the nature of their role and the close proximity to their patients. Unlike other health professionals who may focus on a relatively limited scope of the patient's condition, nurses care for their patients as whole human beings including their human response to illness and suffering (Papadatou, Bellali,

& Petraki, 2002); and (Rashotte et al., 1997). Consequently, a nurse's emotional involvement in the process of caring could become more personal and intimate than other care providers, which may compromise their personal and professional boundaries when a long lasting bond with a child ends in death. Without timely institutional interventions and coping strategies, witnessing patients' suffering, pain, and death could result in emotional distress and grief for the nurse (Rushton, 2004) , (Zander & Hutton, 2009) and (Clements & Bradely, 2005) with potentially serious professional and personal ramifications on the nurse's part.

The health care literature contains numerous studies exploring the feelings of nurses in different specialty areas following the death of patients under their care. Qualitative and quantitative studies have explored and examined nurses' feelings and attitudes towards the death of their young patients in different health care settings, especially in highly stressful areas such as Intensive Care Units (ICU) (Downey, Heuer, & Juhl, 1995), Neonatal Intensive Care Units (NICU) (Couden, 2002), Pediatric Intensive Care Units (PICU) (Rashotte et al., 1997), pediatric oncology (Feldstein & Buschman-Gemma, 1995); and (Papadatou et al., 2002). These studies, however, focused *only* on the description of the grief experiences as personal accounts and feelings among nurses who cared for patients with life-limiting or terminal illnesses. As detailed in the literature review chapter below, several studies focused on pediatric nurses' description of their personal grief experiences following the death of their patients (Feldstein & Buschman-Gemma, 1995); (Rashotte et al., 1997); and (Papadatou et al., 2002) while ways to deal

with grief were explored by others (Ashby, Kosky, Laver, & Sims, 1991), (McNeely, 1996), (Medland, Howard-Ruben, & Whitaker, 2004) and (Zander & Hutton, 2009).

Nurses deal with many issues that influence their attitudes towards their professional roles and willingness to continue to be care providers. One of these issues experienced by different helping professionals is burnout which started to emerge as a new concept in the 1980's (Maslach & Jackson, 1981). Another work environment-related issue is job satisfaction, which has been investigated heavily among nurses in various clinical settings (Stamps, 1997). The Index of Work Satisfaction (IWS) for nurses—discussed in detail in the method's section—has been widely used for research and administrative purposes alike.

Work environmental variables investigated in the current study stemmed largely from an abundance of literature on these variables that are discussed in more details in Chapter 2. Some of the other environmental and work-related factors experienced by nurses such as stressful work conditions (Hoffman & Scott, 2003), (Stordeur, D'hoore, & Vandenberghe, 2001); workload, (Greenglass, Burke, & Riksenbaum, 2001); and organizational styles (Bratt, Broome, Kelber, & Lostocco, 2000); have been investigated in relation to professionals' reported job satisfaction and burnout. Burnout and job satisfaction have been linked to nurse productivity and retention in the workplace (Mrayyan, 2005), (Erenstein & Mccaffrey, 2007), and (Anderson, 2008); as well as the quality of patient care (Billeter-Koponen & Freden, 2005); (Litvak, Buerhaus, Davidoff, Long, Mcmanus, & Berwick, 2005), and (Toppinentanner, Ojajarvi, Vaananen, Kalimo, & Jappinen, 2005).

Despite the abundance of nursing literature on job satisfaction and burnout, the two workplace issues were addressed either individually or in combination with variables related to some aspects of the nursing clinical environment. For instance, work-related stress was a major aspect that was studied in relation to burnout and highlighted in several studies (Billeter-Koponen, et al., 2005); (Cohen-Katz, Wiley, Capuano, & Baker, 2004); (Farrington, 1997); and (Kennedy, 2005). Job satisfaction was correlated with work stress among nurses (Bratt et al., 2000); (Healy & Mckay, 1999); (Healy & Mckay, 2000); and (Michie, Ridout, & Johnston, 1996). No studies, however, incorporated pediatric nurses' grief experience and its potential relationship to job satisfaction and burnout. The only published study (Anderson, 2008) that investigated grief experience, burnout and turnover patterns was conducted among Certified Nursing Assistants (CNA's) working at nursing homes. Anderson (2008) concluded that complications from grief could contribute to staff burnout but the results showed that even though grief had no significant impact on turnover patterns, it may have a complex and indirect effect on turnover. Only one other study examining relationships among grief, burnout and job satisfaction was based on an expert's personal account; it offered oncology nurses advice on how to avoid burnout as a result of grief experience (Braccia, 2005). Therefore, the present study was designed to address a specific empirical literature gap and explore whether any relationships exist between pediatric nurses' grief experience and two contextual work-related variables, namely, burnout and job satisfaction.

Study Purpose

The purpose of this study was to examine the relationships between pediatric nurses' self-reported grief experience related to their patients' deaths and their perceived levels of burnout and job satisfaction. The literature shows that the concepts of grief, burnout, and job satisfaction have been studied among nurses to different extents yet largely in isolation from each other. This research examined and explained proposed relationships among pediatric nurses' grief and their self-reported burnout and job satisfaction. The results of this study could be utilized to design and implement an early in-service grief education and intervention program for pediatric nurses who are at risk of experiencing patient's deaths to ward off potential ramifications on their perceptions of their professional performance or future as care providers.

The goal of this research was to gain empirical understanding of the pediatric nurses' self-reported experience of grief following the death of their patients. Associations among the grief experience, burnout and job satisfaction were identified and discussed. The recommendation section of this dissertation outlines the nursing implication of the results to help establish an early grief education and intervention program for pediatric nurses who deal with patients' deaths to prevent possible negative consequences of burnout and a decline in job satisfaction among pediatric nurses. This intervention program would be education-based in which nurses learn about the grieving process and its association to other work related variables such as burnout and job satisfaction. Optimum delivery of the education and intervention program would be

during orientation to high risk patient care units as well as the recurrent annual competency classes.

Specific Aims

Aim 1:

The aim of this research was to examine and describe the relationships between pediatric nurses' self-reported grief experience, measured by the Revised Grief Experience Inventory (RGEI) (Lev, Munro, & McCorkle, 1993), resulting from patients' deaths in a large metropolitan university-based children's hospital, with the nurses' self-reported perceptions of burnout, measured by the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981), and job satisfaction, measured by the Index of Work Satisfaction (IWS) for nurses (Stamps, 1997). Clinical experience of the target pediatric nurses population ranges from one to more than 20 years of bed-side patient care. The time frame for the self-reported variables was set for the 12 months prior to participating in the study. Furthermore, the participants estimated the number of patients whom they had experienced the death of during the same period of time.

Aim 2:

This study also aimed at utilizing the descriptive data obtained in specific Aim 1 to examine and highlight associations of self-reported grief experience (RGEI) with burnout (MBI) and job satisfaction (IWS) scores. Confounding personal and institutional variables including nurses' age, years of nursing experience, number of patient deaths in the previous 12 months, and adverse life events/personal loss were adjusted for

statistically to see a more accurate picture of the nature of the relationships that the reported grief experience had with burnout and job satisfaction.

Research Questions and Hypotheses

1. What are the pediatric nurses' grief experience scores on the Revised Grief Experience Inventory (RGEI)?

Hypothesis 1: Pediatric nurses will report variable degrees of grief following the death of their patient(s) as indicated by their scores' descriptive analysis of the RGEI.

2. What are the pediatric nurses' burnout scores on the Maslach Burnout Inventory (MBI)?

Hypothesis 2: Pediatric nurses will report variable levels of burnout as indicated by their scores' descriptive analysis of the MBI.

3. What are the pediatric nurses' job satisfaction scores on the Index of Work Satisfaction (IWS) for nurses?

Hypothesis 3: Pediatric nurses will report variable levels of job satisfaction as indicated by their scores' descriptive analysis of the IWS.

4. What is the correlation between participants' RGEI grief scores and their MBI burnout scores?

Hypothesis 4: Participants' RGEI grief scores are positively correlated with their MBI burnout scores.

5. What is the correlation between participants' RGEI grief scores and their IWS job satisfaction scores?

Hypothesis 5: Participants’ RGEI Grief scores are negatively correlated with their job satisfaction scores.

6. What is the difference in RGEI grief scores between nurses who are exposed to more patient deaths and those who experienced less patient deaths?

Hypothesis 6: Pediatric nurses who are exposed to more patient deaths report higher RGEI grief scores than those who are exposed to fewer deaths during the same time period of time.

7. What is the difference in RGEI grief scores between nurses who are exposed to more recent patients’ deaths and nurses who have less recent exposure?

Hypothesis 7: Pediatric nurses who experienced more recent patients’ deaths report higher RGEI scores than those who experienced less recent patient deaths.

Table 1.1 summarizes hypothesized directions of relationships among variables of interest. Results and discussion chapters address these questions and hypotheses in order of their appearance.

	Independent Variable (RGEI Score)	
Dependent Variable s	High RGEI Score	Low RGEI Score
Job Satisfaction (IWS)	Low	High
Burnout (MBI)	High	Low

(Table 1.1) Hypotheses Matrix and Directions of relationships

CHAPTER 2

REVIEW OF THE LITERATURE

Grief and Nurses

Definition:

Despite the rich healthcare literature, the concept of grief does not have a single definition. Although grief, as a reaction to a perceived sense of loss, has universal manifestations, a critical review of the literature and concept analysis revealed differing perspectives on the definition of grief (Cowles & Rodgers, 1991). After conducting a thorough literature search using the keywords grief and bereavement in nursing and medical journals published from 1985-1989, Cowles and Rodgers (1991) randomly selected 74 articles as their population. They found that there “rarely was an actual definition of grief provided by an author” (p. 121), and that grief was often used with other terms and expressions in order to describe and contextualize it, such as: process, reaction, acute, chronic, uncomplicated, and normal grief. For the purpose of the current study, the researcher chose the following definition that resulted from the concept analysis by Cowles and Rodgers (1991): Grief is “a dynamic, pervasive, highly individualized process with a strong normative component” (p. 121). This process has an antecedent perception of loss of a dear person or object, and is usually followed by wide ranging emotional as well as physical consequences.

The literature indicates that the grief process is a complex experience in which an individual or group experiences a sense of loss. The individual wishes that the event had

not happened and consequently feels pain and anguish because that wish could be fulfilled (Downey et. al., 1995).

Nurses' Experience with Grief

A body of literature on grief among nurses caring for old and young patients is well-established, however; it is more qualitatively focused on nurses' stories, emotional reactions, and meaning making of their experiences with dying patients. The majority of these published studies are qualitative in nature, evidenced by the much larger volume of exploratory qualitative than quantitative studies that are available via various healthcare literature databases. For instance, (Scott, 1994), in an anecdotal article, wrote about her personal account of providing care to a nine-year-old child with Cystic Fibrosis (CF). The patient died while under her care at a pediatric unit. In this first-hand report of personal grief experience, Scott expressed her emotional reaction and feelings of sadness and sorrow following the death of a patient she took care of for a long period of time. A similar experience was described by Stowers (1983) who witnessed the death of a 17 year-old who apparently committed suicide using a gunshot. Even though there was no interaction with the patient while alive, the sadness and depression resulting from witnessing the family's suffering was strong enough to affect the author's daily functioning and wellbeing for a long period of time. The poem in the prelude page above was written in memory of that victim.

Scott (1994) described a clear and strong interpersonal bond with her patient, and openly expressed the extent to which that bond reached when the dying patient was

affectionately described as “a benevolent dictator who ruled our unit—and our hearts” (p. 54). Scott not only expressed feelings of personal loss and sadness following the death of her patient, but also joy for the privilege of being a part of the same patient’s life. Close personal involvement in the care of her client was a primary motivator for Scott’s feelings of sadness and grief over the loss of this young patient. That “. . . was the most difficult moment in my nursing career—saying good-bye to a patient I’d come to love as a little brother” (p. 55).

The qualitative studies on nurses’ grief are largely of an exploratory nature. For example, Rashotte et al., (1997) recruited six pediatric intensive care unit (PICU) nurses to participate in a phenomenological study of their grief experience. The participants’ nursing experience ranged from 2 to 20 years and they had experienced the death of at least three patients. This study aimed at describing the grief experiences among these pediatric nurses after their patients died. The study found that the feeling of “Hurting” was expressed by the majority of participants in response to the death of their patients. The study called for further in-depth investigation into what the authors called nurses’ “experiential learning process to coping with multiple, accumulated losses” (p. 385). This learning process was utilized by some participants in order to find personal ways of dealing with the feelings of loss and grief after a patient passes away.

Results of a another qualitative study of 16 Greek pediatric oncology nurses and 14 oncologists showed almost all nurses interviewed expressed a unique feeling of grief (Papadatou et al., 2002). This unique feeling was differentiated from the kind of grief physicians expressed in their stories. The authors concluded that physicians tended to

grieve differently from nurses by focusing over losing the battle with patient's disease (in this case cancer), while nurses reacted with a more personal grief over the loss of a relationship with the patients and their family (Papadatou et al., 2002). These findings support the idea that the grief process is highly individualized (Cowles & Rodgers, 1991), in this case nurses and physicians grieved differently. Therefore, ways of coping needed may be of different nature from one person to the other.

Nurses' Coping with Grief

Findings consistent with the above literature were reported in a qualitative study that used a grounded theory approach to investigate the grief experience of 25 female nurses who cared for patients who died in a pediatric setting (Davies, et al., 1996). The sample had a wide range of experience in nursing in general (2-24 yrs, \bar{x} = 9 yrs) and in pediatric nursing experience (10 months-24 yrs, \bar{x} = 7 yrs). Participants described their experiences in caring for dying patients that had taken place between 3 weeks and 19 years prior to the interviews. The core phenomenon of grief was seen as nurses' struggle with their grief distress and moral distress in the context of nurse-child relationship. Davies et al. found that struggles related to nurse-patient relationships occurred in a mutually caring relationship between the nurse and the child where both made a difference in each other's lives. Both Davies et al. and Papadatou et al. found that this struggle led to actions on the nurses' side to try to cope with grief they experienced. A similar finding was also reported among nurses who tried to learn how to cope with grief in an experiential fashion (Rashotte et al., 1997). Under pressure to remain strong and not

buckle under stress, some nurses reported that they were torn between their professional image and personal feelings when a child's death seemed imminent (Davies et al., 1996). These nurses tried to find common ground between the need to remain professional and strong while struggling with sharing with others their impending grief through the desire to express personal sorrow and sadness, however reluctantly (Brown & Wood, 2009). Brown and Wood described a paradoxical situation where nurses encouraged families to express their feelings about their experience after the death of a loved one to help them through the grieving process, but at the same time they themselves were unable to openly express their feelings regarding the same experience for fear of looking unprofessional or weak before their clients. With a largely absent institutional intervention, some participants reported using available resources and mechanisms for coping with grief through sharing feelings and venting emotions with co-workers, friends, and family members; and practicing hobbies for diverting negative emotions (Downey et. al., 1995; and Papadatou et al., 2002) while others tried to deal with grief by engaging in learning how to establish professional boundaries and engage in self reflection, which they expected to help them come to terms with the death experience and create meaning and acceptance of one's feelings (Rashotte et al., 1997) and (Zander & Hutton, 2009). While some nurses reported that they had used informal resources to deal with grief (Downey et al. 1995; Rashotte et al., 1997; and Papadatou et al., 2002) such as enlisting help from their close circle of friends, family, and colleagues, the benefit seemed readily tangible because the mere mentioning of the situation to a colleague or a family member seemed to help some (Stowers, 1983). Others seemed to suppress their feelings of sadness, anger

and frustration and engage in diversionary activities such as sports, or resort to withdrawal and being alone for a period of time to reflect on the experience and try to find meaning in their lived experience with grief (Papadatou et. al., 2002).

Even though seeking support from peers and friends was reported to be sufficiently helpful to some, others believed that professional help was still needed including counseling, support groups, and seeking education into how to deal with grief (Spencer, 1994). Other authors, however, reported underutilization of formal support among nurses without being able to pinpoint the reasons or the barriers to accessing formal support (Shorter & Stayt, 2009). Using a mixed design to investigate how nurses coped with grief over patient's death, Spencer (1994) targeted all 71 nurses at a Northern England hospital ICU as a convenience sample. With a response rate of 72% (N=51), the results showed that about 80% of nurses reported that they had received support from colleagues after a patient's death, half of whom reported that the support they received was sufficient. There was no significant difference in the amount of support received from colleagues in light of the length of nursing experience or job grade; depending on experience and qualifications according to the British system in categorizing nursing ranks (Monster.co.uk, 2010). The rest of participants (20%) reported that they had not received any support from colleagues after experiencing a patients' death (Spencer, 1994). It is imperative to report that none of the previously reviewed studies explored in depth the role of professional or institutional grief interventions for the nursing staff which could indicate a gap in the current literature on strategies nurses can use to cope with grief.

Measurement of Grief

Based on the initial qualitative research and subsequent studies, measurement tools were developed and used to quantify grief as a concept. While qualitative results highlighted the characteristics of grief through nurses' stories and explored the feeling of sadness and hurting, as some participants described their experience of a patients' death: "it tore me apart" and "it left me with really bad pain" (Rashotte et al., 1997, p. 377), other studies used quantitative tools to measure grief through self-reporting questionnaires. Downey et al., (1995) adapted a survey of nurses' reactions to patient death that was originally designed and used by Popoff (1975). Downey et al. studied 59 NICU nurses who cared for dying infants and examined their reaction to their patients' deaths. Some of the physical and emotional signs and symptoms related to their caring for dying patients were lack of exercise, chronic fatigue, headache, irritability, and becoming more over-critical of others. Quantification of grief as a concept allowed researchers to compare different groups of nurses. Feldstein and Buschman-Gemma (1995) measured and compared grief among four groups of adult oncology nurses (N=50, response rate: 43%): 1) nurses who resigned and left oncology nursing, 2) oncology nurses who transferred to another area of practice, 3) oncology nurses who transferred to another oncology setting, and 4) oncology nurses who remained in the same place. Using the 102-item Grief Experience Inventory (GEI) instrument (Sanders, Mauger, & Strong, 1985), the authors found that cumulative grief scores among nurses who stayed (groups 1 and 2) were higher than those who left (groups 3 and 4) but were not significantly different. However, nurses in all four groups reported high scores on the GEI sub-scales

of despair, social isolation, and somatization, which could be interpreted as the inability of those who left to resolve their grief by leaving or transferring to a different unit and that other interventions maybe necessary for them to resolve their grief. Anger/hostility scores were lower in nurses who left but the difference was not statistically significant. While the results showed that oncology nurses exhibit a degree of unresolved grief over the death of their patients, which is consistent with previous qualitative studies (Davies et al., 1996; Rashotte et al., 1997; and Papadatou et al., 2002). Feldstein and Buschman-Gemma (1995) concluded that nurses may need formal counseling or professional intervention to help them resolve grief and that merely leaving one's current job or transferring to another setting may not be sufficient.

Intercultural Grief Perceptions

Cultural background appeared to shape how nurses in different cultural settings perceived and reacted to the death of their patients in a pediatric oncology unit (Papadatou & Chung, 2001). The authors compared the views of Chinese and Greek pediatric oncology nurses on patients' deaths and reported that while over a third of Greek nurses interviewed felt angry and frustrated, none of their Chinese counterparts expressed similar feelings following the death of their patients. In this comparative transcultural qualitative study between pediatric oncology nurses in Greece (N=39, experience \bar{x} =11 years) and Hong Kong (N=24, experience \bar{x} =13.5 years), Chinese nurses expressed a feeling of relief after the death of their patients which they perceived as an end to patients' pain and suffering. Although the characteristics of the grief process or the way it's expressed may differ from one culture to another (Cowles & Rodgers,

1991), the concept of grief itself is not different. In their effort to expand the concept of grief, Cowles and Rodgers (1991) conducted focus groups of five different ethnic backgrounds: African, Asian, Anglo, Native American, and Hispanic. The authors reported that grief, as a concept, transcends culture in its definition. Therefore, the definition of grief used above in the beginning of this chapter was determined by the same authors to be “culturally sensitive and didn’t require any modifications” (p. 293).

As nurses witness their patients suffer and die while under their care, they may be affected and suffer themselves (Rushton, 2004) in ways that may or may not be resolved by the mere passing of time or changing current jobs (Feldstein & Buschman-Gemma, 1995). Therefore, it is necessary to investigate the grief experience of pediatric nurses more deeply in relation to other personal, environmental, and contextual factors in order to be able to help nurses deal with their grief. It may have been a natural tendency among nurses to advocate and ensure the absence patient’s suffering before dying as of utmost importance to them among other patient care-factors as a way to reduced their own suffering too (Kirchhoff, Spuhler, Walker, Hutton, Cole, & Clemmer, 2000). Relevant contextual variables that nurses may face due to exposure to distress resulting from patients’ deaths include burnout, which may reflect negatively nurses’ productivity, performance and retention (Anderson, 2008). The following section addresses burnout among nurses.

Burnout and Nurses

Definition

Maslach, Schaufeli, & Leiter (2001) defined burnout as a syndrome that affects individuals who are in the helping or caring professions, such as nurses, psychologists, police officers, therapists, etc. Burnout as a concept incorporates three constructs: emotional exhaustion (EE), depersonalization (DP), and low personal accomplishment (PA) (Maslach et al., 2001). The concept of burnout emerged in the early 1970s and was introduced in its current form in the early 1980s by Christina Maslach, a psychologist and professor at the University of California at Berkeley (Maslach & Jackson, 1981). The Maslach Burnout Inventory (MBI), an assessment tool of burnout among different service professionals, reflects these three constructs that measure a professional's level of the three components. The MBI is discussed in details in the instrumentation section of Chapter 3.

Maslach and Leiter (1997) discussed the historical background of employer-employee relationships and conflicts and provide a relevant context examining the burnout phenomenon. In the early stages of the industrial revolution workers were exploited by employers to do as much work as possible for as little return as possible, which benefited the employers. Employers had the ultimate control of the working conditions while workers had no say in work related matters, such as working hours, wages, and sick leaves. Later on, worker unions were established for defending workers' rights and welfare. Workers' unions stood up to what they viewed as unfair and hazardous working conditions. Unions organized and represented workers and defended

their rights resulting in laws and regulations to be changed for the workers' benefit and well being. In the United States, the National Labor Union started organizing laborers and farmers in 1866 in an attempt to pressure congress to improve the workers hours and conditions for American workers (Britannica, 2010). Following the establishment of labor unions around the US and the world, workers started feeling proud of their work and having a sense of belonging to their place of work which might have understandably enhanced performance and increased productivity among workers. Consequently, workplaces witnessed positive return for the employer, in terms of increased productivity, as well as workers, in terms of favorable working conditions and compensations (Maslach & Leiter, 1997). Nurses, as workers, are engaged in similar employer-employee relationships. Nurses in many organizations organize in professional unions that represent them and negotiate on their behalf work conditions, salaries, and other work-related terms and compensations. Work-related contextual conditions such as experiencing grief over patient death may reflect on nurses' performance, productivity and retention (Anderson, 2008), which may have personal as well as financial ramifications for the nurse and the institution alike.

In this electronic age, the pressure on workers is even greater to do more for the same or even lower return from the employer, which could affect the productivity and the quality of their work. In the current worldwide economic recession, factory workers face a demand for more productivity for less cost, or nurses in a hospital are faced with a demand for serving a bigger number of clients in less time; highly demanding workload

emerges as a potential cause of workers resentment and burnout in the workplace (Maslach & Leiter, 1997).

Workload is an important factor that could lead to burnout where the individual is asked to carry a heavier burden and perform more duties than they are capable of doing. The current corporate work climate characterized by a progressively increasing use of technology, outsourcing, and less human resources, makes job demands often too high and workload pressures too great for workers to keep up with corporate goals of financial gains and competition in tough domestic and international markets. A nurse, relating her professional experience with burnout, made the following analogy “When you have to care for so many people, you begin to suffer from an emotional overload—it’s just too much. I’m like a wire that has too much electricity flowing through it—I’ve burned out and emotionally disconnected from others” (Maslach C. , 1982, p. 2). By nature of the corporate world, business operations and strategies mandate profit-driven actions to be taken and policies to be implemented in the workplace. Companies often cut jobs as a first measure to reduce cost in times of economic instability. For instance, due to the economic recession that is affecting many aspects of world economy, the US economy lost an estimated 539,000 jobs in April, 2009 (The US Department of Labor (DOL), 2009). More recent numbers indicate a modest job growth of 162,000 in March, 2010 (The US Department of Labor (DOL), 2010). The same applies to a largely non-regulated health care system and to health care workers including nurses who make up the largest portion of the health workforce. Instead of focusing on work conditions dynamics of the employer-employee relationships, and the complexity of the current workplace in all

fields, corporations often blame the employee for the lack of productivity and accuse the employee of being lazy or non-productive (Maslach et al., 1997), further decreasing morale and leading to feelings of not-belonging and disloyalty to what was once the worker's passion.

Components of Burnout

The following sections will describe the components of burnout as laid out by Maslach (1982).

Emotional Exhaustion (EE)

The emotional exhaustion component of burnout is where the helping professional, in this case a nurse, becomes emotionally drained by the recurrent involvement with his/her clients. Nurses can be a prime candidate for emotional exhaustion as a result of intense and frequent interaction while caring for their patients and families. As the physical and emotional demands of nurses' work increase so does their susceptibility to emotional exhaustion. Common work stressors were found to explain 22% whereas leadership variables explained only 9% of the variance in the emotional exhaustion measure among nurses in hospital settings (Stordeur et al., 2001). In this descriptive study of 625 nurses from a university hospital in Belgium, the author measured stress resulting from physical, psychological, and social environment under which nurses were working. The stress aspect was measured using the Nursing Stress Scale (NSS) while the leadership aspect was measured using the Multifactor Leadership Questionnaire (MLQ). The MLQ assesses leadership style through measuring transactional and transformational behaviors among nursing leadership personnel. A

noteworthy result of this study was that the leadership styles referred to as transformational and contingent reward leadership styles, which involves motivating subordinates to achieve higher goals while acting as agents of change themselves, did not have a noticeable impact on nurses' emotional exhaustion (Stordeur, et al., 2001). The results of this study conforms with results from previous studies that grief has an emotional impact on nurses and that more needs to be done to relieve nursing staff emotional exhaustion as a result of the buildup of a burden of negative emotional charge in the work place.

Depersonalization (DP)

Depersonalization is another component of burnout; the nurse becomes desensitized by the volume and frequency of client interaction and involvement which he or she faces on a daily basis. The result would be that the nurse gets less interested or enthusiastic about helping because of the repetitiveness of a monotonous job they are performing and the increased frequency of the help they provide. Consequences of burnout among nurses on patient safety outcomes were highlighted in a study among nurses at a Veteran's Association (VA) hospital (Halbesleben J. , Wakefield, Wakefield, & Cooper, 2008). In this cross-sectional study, 148 Registered nurses from a Midwestern VA hospital (representing different specialties and age groups) completed the MBI to measure burnout and the Agency for Healthcare Research and Quality (AHRQ)'s Patient Safety Culture Survey to assess their perceptions and reporting behaviors of patient safety concerns and errors. The study found that burnout was associated with a lower perception of patient safety and was negatively associated with reporting mistakes that did not cause

patient harm (Halbesleben, et al., 2008). Such a scenario could indicate that nurses may develop a sense of depersonalization, thus becoming less engaged with their day to day duties in providing safe care to their clients, which can be long lasting if the emotional exhaustion is not resolved (Couden, 2002). Positively correlated with emotional exhaustion and negatively with personal accomplishment components of burnout, depersonalization could be viewed as a defense mechanism by nurses to limit their personal involvement in patient care in case the patient deteriorates or dies in order to minimize the emotional and physical consequences of going through patients' death experiences (Maslach, et al., 2005).

Personal Accomplishment (PA)

Personal accomplishment is the only negatively worded component of burnout. To contribute to someone's burnout, PA must have a low score as part of the MBI instrument. A reduced personal accomplishment refers to a worker's feeling of under achievements in the professional arena. This may include low sense of accomplishment on several fronts: personal and professional growth, promotions, and positively contributing the clients' well-being. Some human-service workers may have a self-perceived inadequacy regarding their ability to relate effectively to their clients. This perception could spread among these workers because of their "self-imposed verdict of failure" (Maslach, 1982, p. 5). Low PA may lead to low levels of self-esteem among the employees resulting in feeling depressed and isolated. Some may start thinking that this kind of work is not for them and look into changing career paths for something that involves less person-to-person contact and engagement with people in order to avoid

stressful situations. This could trigger turnover challenges for managers and institutions alike. Combined with high emotional exhaustion and depersonalization, low personal accomplishment provide a strong mix that drives nurses toward lower quality nursing care, less consciousness about patient safety and eventually higher rates of turnover (Anderson, 2008).

Because of the lack of empirical literature focusing on the relationships between nurses' grief and burnout's three components, it was one of the aims of this study to investigate such possible relationships. Burnout is a serious phenomenon that may result from multiple variables in the work place including workload, exposure to emotional burdens of client care, and perceived sense of inadequacy and reduced accomplishment. A relevant concurrent concept that relates to burnout is job satisfaction. How nurses perceive their careers and how satisfied they are currently could complicate institutional work circumstances when combined with burnout issues for any organization. Job satisfaction has been shown to have strong connections to burnout and other work-related variables in the clinical area. Literature on nurses' job satisfaction and related contextual variables is reviewed in the following section.

Job Satisfaction and Nurses

Definition

Job satisfaction is traditionally and simply defined as the "extent to which employees like their jobs" (Stamps, 1997, p. 13). The concept of job satisfaction is variable and flexible. The components that give it shape are contingent upon the

profession of interest and the setting in which this profession is performed. Similar to burnout, job satisfaction is of noticeable interest to managers as well as decision and policy makers in a variety of settings as it plays an important role in employee retention and turnover (Kovner, Brewer, Wu, Cheng, & Suzuki, 2006).

For nurses, job satisfaction not only has a general resemblance to job satisfaction in other professions but also has aspects that are unique to nurses. Sengin (2003) conducted a literature review to investigate the work-related attributes of nurse job satisfaction in general acute care hospitals where a wide range of patients of different ages and conditions are treated and cared for by nurses. The author reviewed relevant literature that addressed key attributes to nurses' job satisfaction in acute care settings. Based on the consistency and frequency of appearance in the literature, the author identified ten key attributes to nurse job satisfaction. Components of job satisfaction among nurses included "autonomy, interpersonal communication/collaboration, professional practice, administrative/management practices, status/recognition, job/task requirements (workload), opportunity for advancement, working conditions, pay and fairness" (p. 317).

Reaffirming several of the above components of job satisfaction in Sengin (2003) study, positive relationships have been identified between work as well as family-related variables and nurse job satisfaction. Kovner et al. (2006) reported that more than 40% of the variance in job satisfaction scores—among a randomly selected sample of 1,907 registered nurses distributed among 29 states—was explained by various nurses' work attitude scales. Variables that significantly contributed to nurse job satisfaction among the

different nurses' attitude scales were: high autonomy, high distributive justice, group cohesion, promotional opportunities, low work-family conflict, low organizational constraints, and high supervisor support. Kovner et al., however, did not find a significant relationship between workload and job satisfaction, contrary to other published studies (Davidson, Folcarelli, Crawford, Duprat, & Clifford, 1997) and (Hoffman & Scott, 2003). Davidson, et al. (1997) found that high workload was one of the top two causes of dissatisfaction along with poor organizational communication among general hospital nurses. The number and quality of task requirements (workload) were ranked as sources of job satisfaction after variables such as pay, professional status, and nurse-to-nurse and nurse-to-physician interactions (Hoffman & Scott, 2003).

Literature Summary and synthesis

It can be argued that nurses possess a unique role in caring for pediatric patients. Part of this unique caring role is being close to the patient all the time. Unlike other health professionals who may focus on a relatively limited scope of the patient's condition, nurses care for patients as whole human beings and their responses to illness. Nursing is a helping profession that provides care for individuals and families, during times of wellness and times of distress and illness. Therefore, it's only logical to expect grief, sadness, and suffering among nurses (Couden, 2002; Rushton, 2004) when one of their patients suffers or dies. Other authors argued that the exposure to patients' suffering and death may predispose nurses to stress and burnout (Hammer, Nichols, Armstrong, & Rose, 1992; Kennedy, 2005; Rashotte et al., 1997; and Spencer, 1994). Describing their

personal grief, Stowers (1983) and Scott (1994) discussed feelings of personal loss following the death their patients. Personal involvement and identification with the family were primary motivators for their feelings of sadness and grief over the loss of these young patients and was described as the “most difficult moment in my nursing career (Scott, 1994, p. 55). This type of emotional burden can be taxing to the nurse where workload becomes greater. Task requirements (workload) was ranked as one of the highest sources of nurses attitudes toward job satisfaction after such variable as pay, professional status, and nurse-to-nurse and nurse-to-physician interactions (Hoffman, 2003). Experiencing repeated patients’ deaths adds to this workload in ways that do not allow nurses to recover or go through traditional grief stages because these stages keep getting interrupted by a new grief experience which deprive the nurse from the opportunity to heal and recover Brown (2009).

Papadatou et al. (2002) found that physicians and nurses grieved differently. Nurses reported that they grieved over the loss of a relationship with the patients and their family while physicians grieved over a lost battle with cancer. Davies et al., (1996) and Papadatou et al. (2002) found that nurses tried to deal with and manage the grief they were experiencing. A similar theme was seen in nurses trying to learn how to cope with grief on an experiential fashion (Rashotte et al., 1997). Some nurses believed that informal ways of dealing with grief were sufficient as they sought help from peers, friends, and family members, while others argued that formal ways are needed such as counseling and support group. For instance, Stordeur et al., (2001) argued that more

needs to be done to relieve nursing staff emotional exhaustion and suffering as a result of the buildup of emotional burden in the work place.

Nurses did not necessarily get relief by leaving an emotionally charged unit environment and even though grief scores among nurses who stayed on the job were higher than those who left, the differences were not significantly different (Feldstein & Buschman Gemma, 1995). Moreover, both groups of nurses who left and those who stayed still had high scores on the GEI sub-scales of despair, social isolation, and somatization, which could be interpreted as the inability of those who left to resolve their grief by leaving or transferring to a different unit and that other interventions maybe necessary for them to resolve grief.

Burnout and job satisfaction have been linked to nurse productivity and retention in the workplace as well as the quality and safety of nursing care. Despite the abundance of nursing literature on job satisfaction and burnout, they were investigated either individually or along with other variables related to the nursing clinical environment such as stress, productivity and retention (Billeter-Koponen, et al., 2005). No studies, however, incorporated pediatric nurses' grief experience and its potential relationship to job satisfaction or burnout. Anderson (2008) published the only available empirical study that investigated grief experience, burnout and turnover patterns among Certified Nursing Assistants (CAN's) working in a nursing home environment. Anderson (2008) concluded that complications from grief could contribute to staff burnout and turnover, which could have significant implications if generalized to the wider nursing personnel at a given organization. Others suggested ways for coping and dealing with grief. For example,

Saunders & Valente (1994) discussed a bereavement task model to explain how nurses grieve and cope with patients' death. However, this model was not based on empirical testing of a theory and instead was based on literature review and personal experience of the authors and the results of bereavement workshops offered by the authors to nurses.

The preceding literature review demonstrated that a knowledge gap exists regarding probable relationships of pediatric nurses' grief, burnout and job satisfaction. The literature has well-documented evidence that pediatric nurses who lived the experience of their patients' deaths reported that they experienced grief as a result of these deaths. Based on the lack of empirical evidence addressing the probable relationships among grief, burnout and job satisfaction among pediatric nurses this proposed research was designed to explore whether these proposed relationships existed between pediatric nurses' grief experience, burnout and job satisfaction as two contextual nursing work-environment variables.

As nurses witness the suffering and death of their patients they may be affected and suffer themselves because of it in different ways (Rushton, 2004) that may or may not be resolved by simply the passing of the time or changing current jobs (Feldstein and Buschman, 1995). The magnitude to which grief affects nurses is not yet known and this study has contributed to addressing this vital aspect of acute pediatric nursing by shedding a new empirical light on this rarely investigated aspect of pediatric nursing practice.

Chapter 3

METHOD

Design

This research used a cross-sectional correlational design. The purpose of this non-experimental Ex Post Facto design was to examine potential relationships among variables as they naturally occurred without outside intervention. Most designs “involving human subjects, including nursing studies, are non-experimental” (Polit & Beck, 2004, p. 188). In this study, nurses’ grief experience, burnout, and job satisfaction are phenomena that occur on a daily basis as part of the nurse’s clinical experience. This correlational design was used to examine whether nurses’ grief scores using the RGEI, which technically represents the independent variable of interest, had any significant correlations with concurrent variables in the nurses’ clinical environment including self-reported scores of burnout and job satisfaction as well as relevant demographic and environmental variables.

Rationale for correlational design

In this study, the researcher was interested in the collective grief scores of nurses in all pediatric units of the target institution. A between-units comparative design was not warranted at this stage of the study for the following reasons: 1) according to the power analysis, this study was set out to recruit a sample of 114 pediatric nurses from five pediatric units at the target institution. This suggested sample size resulted in an average of 22.8 nurses recruited from each unit. Due to the small size of the individual unit

subgroups, analysis of such subsamples could have lead to erroneous conclusions, 2) Splitting the sample into five small groups to compare is not justified either by the original purpose of the study or its questions and aims, and 3) Ethical consideration for subject anonymity could have been threatened by disclosing what these small groups of nurses revealed regarding their job satisfaction and burnout, including direct feedback or critique of unit managers. Such disclosure could constitute a precursor to an internal conflict with unit and institutional leadership.

Therefore, the present study design remained as a cross-sectional correlational design. The three major concepts, of interest to the researcher, naturally occurred in the workplace and relationships were measured as these concepts occurred and interacted with each other without any kind of manipulation or intervention (Polit & Beck, 2004). With the potential of a number of variables that could potentially impact all three major variables, the focus of this design was on the potential relationships grief has with burnout and job satisfaction. In other words, while controlling for assumed environmental variables, the study was designed to find focal relationships among the study core variables. This was done by first establishing that relationships of grief with burnout and job satisfaction existed and then further analysis determined if these are empirical focal relationships explained at least partially by “theoretical processes and meanwhile alternative associations do not account for the observed association” (Aneshensel, 2002, p. 1). The relevant literature review above provided the theoretical basis that supported the use of this type of design as the relationships among grief, burnout and job satisfaction were examined.

The following diagram (figure 3.1) shows the flow of the study design. The big box on the left represents all surrounding variables that may have effects on the main study variables. The three boxes to the right interact with and may be influenced by the variables in the big box on the left. Moreover, grief in the middle rectangle, while interacting with the variables on the left, was suggested to have focal relationships with job satisfaction and burnout as indicated in the literature review above. The purpose is to determine if these focal relationships are empirical relationships while other associated variables are not offering an explanation to the variability in the core variables. This diagrammatic representation fits and is consistent with the study aims one and two found in chapter one that address the relationships between the core variables in this study as well as the conceptual framework that provides conceptual basis for the design of the present study.

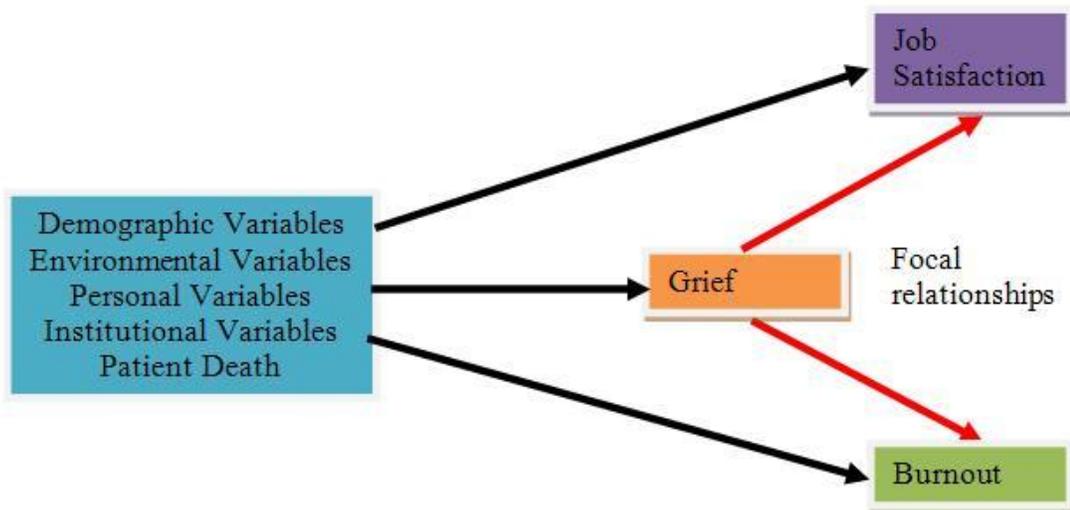


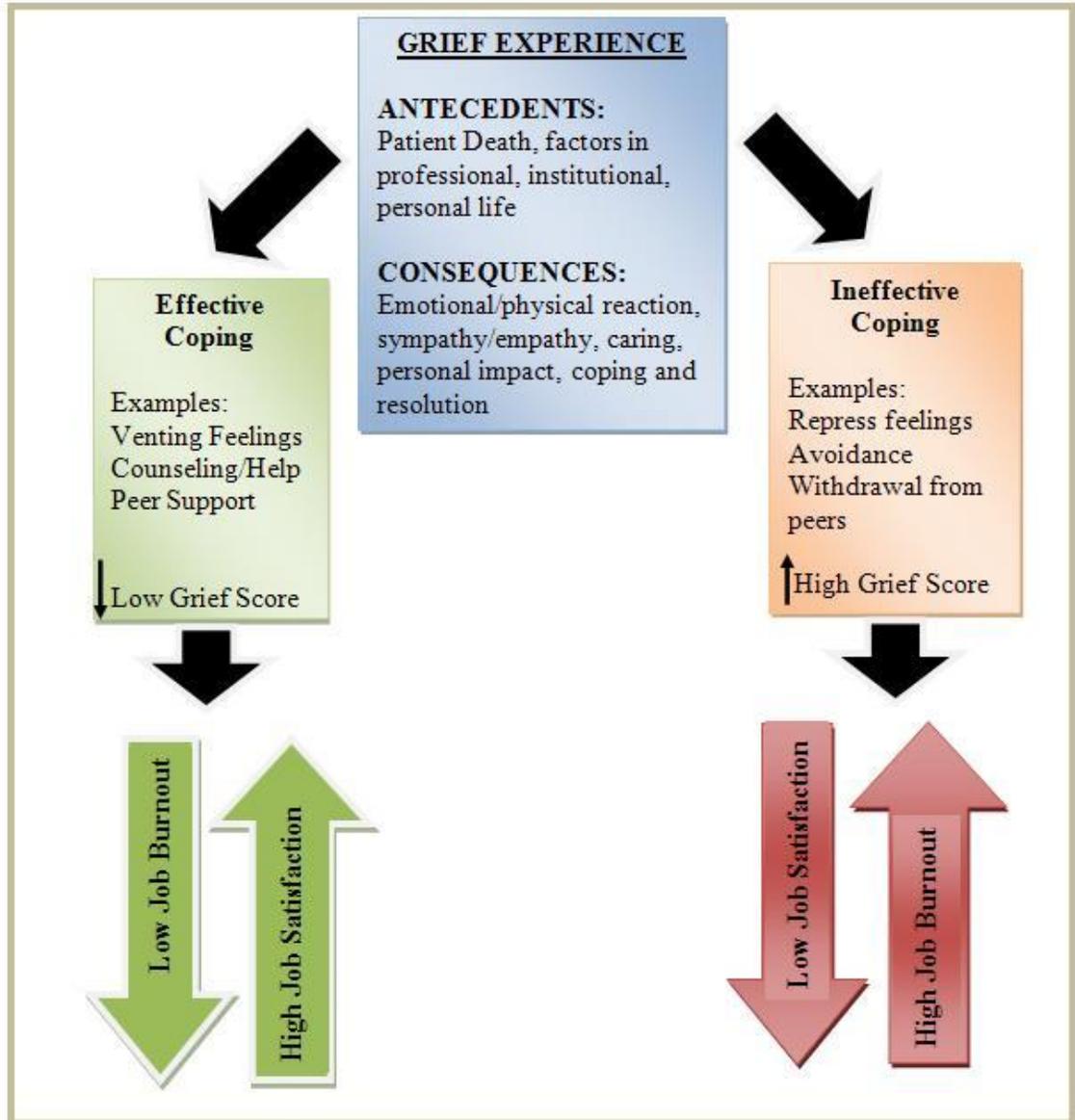
Figure (3.1) Illustration of the focal relationships model adaptation (Aneshensel, 2002).

Following the focal relationships model, first, the main study concepts of grief, burnout, and job satisfaction were measured and described independent of each other using common descriptive statistical methods. The following step in the analysis examined the proposed relationships among these concepts, specifically whether grief has significant correlations with burnout and job satisfaction. Other environmental and personal variables relating to antecedents of grief were measured using a designated section in the study survey, including, demographics, nursing experience in general, and experience in caring for dying children in the past among other variables (Appendix A.2).

The present study design is descriptive in nature, therefore; it does not imply causal relationships between grief and the other variables of interest because the design lacks control over the independent variable, grief (Polit & Beck, 2004). Such control over grief is not feasible to apply due to practical as well as ethical constraints associated with causing grief and suffering to others for the purpose of research. As shown in the hypotheses and as discussed in the literature review and synthesis, the researcher proposed a positive correlation between nurses' grief and burnout and a negative correlation between grief and job satisfaction. In order to get to test these relationships for this design, original data were collected by recruiting pediatric nurses at a large metropolitan Midwestern academic medical center.

Conceptual Framework

The conceptual framework (figure 3.2) adapted for this study is based on Papadatou's model for health professionals' grief process (Papadatou, 2000).



(Figure 3.2) Nursing Grief Conceptual Framework: Adapted from Papadatou (2000)

The conceptual framework was based on a proposed model for healthcare professionals' grieving process (Papadatou, 2000). The proposed framework (figure 3.2) shows the three main study variables: grief, burnout, and job satisfaction. Grief is the central concept of this framework and is explained by antecedents or events that come prior to the grief experience as well as consequences or events that take place as a result of the grief process. The behaviors a person exhibits as a response to the grief experience determine whether an individual engages in effective or ineffective coping in an attempt to resolve the emotional and physical consequences of grief.

This framework is not intended to show causal relationships between grief and burnout and job satisfaction nor does it imply that lower grief will increase one's perception of job satisfaction or decrease job burnout. The conceptual framework was adapted to indicate the directions of proposed associations between a nurse's grief scores and work-related variables such as burnout and job satisfaction. It also proposes an association of grief's impact with nurses' effective versus ineffective coping to grief.

On the right side of the diagram literature-based examples are illustrated to show that ineffective coping such as repressing feelings, withdrawal and avoidance are proposed to contribute to higher score on the RGEI tool. The left side of the diagram shows examples for dealing effectively with grief such as expressing sad feelings, seeking professional help and peer support. These examples are proposed to contribute to a lower score on the RGEI.

Coping, effective and ineffective, was mentioned in the conceptual framework as a linguistic expression of how nurses deal with grief following a patient's death. It may

have been of some value to add a nursing coping measure to the design which could capture how nurses react to the grief experience and what steps or behaviors they took to cope with it. However, coping would be measured as a general concept. No grief-specific coping instruments were found. The literature in the last 10 years contains several articles focused on coping with grief by family members. The vast majority of these articles are non-research based and offered as personal coping experience (Spear, 2005), and professional advice from clinical experts (Fielding & Hong, 2005) and (Spicer, 2003). To partially compensate for that gap, alternatively, the end of the present study's demographic section under the "Sharing of your feelings" heading contained questions about how participants tried to deal with grief. An open-ended question was also added to the end of the survey to capture the coping issue. The question reads: *Please write any additional comments and thoughts about how you have dealt with grief including any strategy that enabled you to deal effectively with your patient(s') death(s).*

The bottom of the diagram includes up and down arrows indicating proposed associations between grief (low vs. high scores) with burnout and job satisfaction. The original model did not include burnout or job satisfaction as dependent/outcome variables. These two variables have been added into the model as they were of interest to the researcher to measure. It was hypothesized by the researcher that higher scores on the RGEI will be associated with lower job satisfaction and higher burnout scores. Vice versa, higher job satisfaction and lower burnout scores were hypothesized to be associated with lower RGEI scores among nurses. This framework is consistent with the research questions as the variables in the model are addressed within the research

questions as well as hypotheses sections. Consequently, the methodology of this study is designed with this conceptual framework in mind so that the proper variables will be addressed and analyzed in light of the dynamics of the framework that include proposed relationships between grief, burnout and job satisfaction.

Sample

A sample of 114 pediatric nurses was needed to meet the power analysis requirements (Table 3.1). A convenience sample of 120 pediatric nurses was recruited from a large Midwestern metropolitan academic medical center. The target population consisted of all registered nurses who cared for patients with acute and life-limiting conditions including patients in the following services: oncology, hematology, metabolic, cardiopulmonary, renal, gastrointestinal conditions, as well as nurses in Pediatric Intensive Care Unit (PICU) and pediatric Bone Marrow Transplant unit (BMT). The rationale for resorting to a convenience sample from one institution for this study was three-fold: first, randomizing a rather small target population of 214 nurses to get 114 random participants would have run a high risk of low response rate as one half of potential participants would have been excluded; second, a low response scenario would have required the expansion of the recruitment to outside of the target organization which was not feasible for time and financial considerations; third, an important reason for using one hospital system for data collection was the consistency of hospital policies and culture as well as the level of patient acuity in the selected hospital. The goal of this sampling method was to give all nurses in the target population an equal chance to participate in the study and to recruit as many as possible. However, if the target sample

of 114 had not been reached, recruitment would have been solicited at another pediatric hospital in the same geographical area with matching patient population and acuity levels.

Inclusion Criteria

Participants met the following criteria in order to be eligible to participate in the study:

1. Minimum pediatric experience of 12 months
2. Worked at the time of data collection in pediatric settings (UMACH's four pediatric units or pediatric float pool).
3. Worked 0.5 FTE or more in the 12 months before data collection started.

Power Analysis

Power analysis (Table 3.1) was conducted and resulted in the following values.

<i>Parameters:</i> <i>A possibility of 9 independent variables</i>	<i>Alpha = .05</i>	<i>Power = 80%</i>
Sample size to detect effect size		
Small effect size	$R^2 = 0.02$	776 subjects
Medium effect size	$R^2 = 0.13$	114 subjects*
Large Effect size	$R^2 = 0.26$	54 subjects
Examples of detectable R^2 for sample size		
100 completed surveys	$R^2 = 0.15$	
80 completed surveys	$R^2 = 0.18$	
* Target for recruitment for this study		

(Table 3.1): Power analysis

The power analysis assumed the following parameters: presence of nine interacting personal and environmental variables: age, gender, personal loss, length of nursing experience, type of patient populations (unit type), exposure to patient death, grief scores on RGEI, burnout score on MBI, job satisfaction score on IWS. An alpha

value was set at 0.05; and power at 80%. For a medium effect size ($R^2 = 0.13$) a sample of 114 participants was needed. For a small effect size ($R^2 = 0.02$) a sample of 776 is needed, which is unattainable given the scope of this project and the time and financial commitments needed to recruit such a number of participants. The medium effect size was chosen for this study. Eventually, the total number recruited for this study ($N=120$) exceeded the target number of 114 participants.

Instrumentation

Demographic Information Form (DIF) (Appendix A.2)

This section included relevant demographic information about the participants in addition to their nursing experience. Also collected were data about nurses' specific experiences with dying children as to how many deaths they experienced in the past 12 months, and whether or not they were the primary nurse for these patients. This section also inquired about major events in the life of the nurse, such as death, divorce, and diagnosis of a serious illness in the direct family. Moreover, data were collected about the type of unit the participants worked at and whether or not they had any plans to quit nursing, transfer to other areas of practice inside or outside of their institution.

Below is a sample section of the demographic survey data:

Did any of the following events occur during the past 12 months?

- Death in immediate family: N Y
- Diagnosis of cancer in family: N Y
- Diagnoses of major illness in family: N Y
- Divorce or separation from spouse or significant other: N Y
- How many patients—that you know of—died on your unit in the past 12 months? _____
- Were you the primary nurse for any of them? N Y, How many? _____

Organization's permission was obtained to access data on patients' death, characteristics of unit and patient populations during the same period of the past 12 months prior to the start of data collection.

The Revised Grief Experience Inventory (RGEI).

The study used the Revised Grief Experience Inventory (RGEI) to measure grief. The RGEI is a 22-question, multidimensional measure of grief (Lev et al., 1993) which includes four subscales: existential tension (ET), depression (Dep), guilt (Glt), and physical distress (PD). The scoring is self-report Likert-scale style with five possible responses: strongly disagree (1), somewhat disagree (2), neither disagree nor agree (3), somewhat agree (4), and strongly agree (5). The RGEI subscales have reliability alphas of 0.87, 0.80, 0.72, and 0.83 respectively and an overall internal consistency alpha coefficient is .93 (Lev et al., 1993). This shortened version was adapted from the original 102-item Grief Experience Inventory (GEI) (Sanders, Mauger, & Strong, 1979). To develop this shortened version, Lev et al. conducted a multi-center, multi-national study on a sample of 420 primary caregivers such as parents, spouses, siblings and relatives who lost a loved one. Nurse-specific empirical instruments are not available in the current healthcare literature. Therefore; it was decided to adopt the RGEI as the closest instrument available to measure grief among nurses. The main characteristics of the RGEI's shortened version are comparable to the general nursing population in the United States. The characteristics of the sample used for the validation study (Lev, et al., 2003) are comparable to those of the current nursing workforce in the US. The sample was mostly Caucasian (88%), female (78%) with a median age of 58 years. The US

Department of Health and Human Services Health Resources and Services

Administration (HRSA) (2004) reported that of all nurses in the US, female nurses represent 96%, white (non-Hispanic) 85%, and nurses' estimated median age is 47 years. Other caring characteristics are shared between the nursing population and the validation study caregiver population. For example, they shared the experience of caring for another sick person often for a long time. Also, they shared the fact that some of those whom they cared for passed away and they had to cope with such a loss either on personal or professional levels or both.

The RGEI was slightly modified as shown with examples below to make it applicable to nurses using minor changes in the language without changing the meaning of the statements. For example: the first item in the original RGEI states: I tend to be more irritable with others since the death of my loved one (Lev et al., 1993). This item was modified to read: I tend to be more irritable with others since the death of my patient. The same type of modification was used with similarly-formatted statements to make them applicable to nurses as opposed to more generalized caregivers such as parents and spouses. Such changes had no impact on the linguistic or the conceptual aspect of individual questions within the RGEI or its subscales. None of the 120 participants made any comments about not understanding the questions while completing the survey.

The Maslach Burnout Inventory (MBI)

The Maslach Burnout Inventory (MBI) is a 22-job-related items questionnaire designed to measure the concept of burnout among human service and helping professionals. The instrument includes questions on how these professionals view their

work and their work environments on everyday basis. The MBI was developed and first introduced to the scientific community in 1981 (Maslach & Jackson, 1981). The MBI uses a 7-point Likert-scale responses to job-related views, where a response of a zero (0) means the feeling (example: I feel depressed at work) never exists and a response of 6 means that the feeling exists every day. The MBI contains 3 subscales referring to the 3 components of burnout; emotional exhaustion (EE), example: I feel used up at the end of the day; depersonalization (DP), example: I treat some patients as if they were impersonal objects; and personal accomplishments (PA), example: I deal very effectively with the problems of my clients.

The MBI has shown strong psychometric properties as evidenced by the Chronbach's coefficients alpha for internal consistency. The original 25-item scale had a Chronbach's alpha of 0.83 for frequency and 0.84 for severity (Maslach & Jackson, 1981). The reliability coefficients for the subscales were: 0.89 (frequency) and 0.86 (severity) for the emotional exhaustion subscale; 0.77 (frequency) and 0.72 (severity) for the depersonalization subscale; and 0.74 (frequency) and 0.74 (severity) for the personal accomplishment subscale (Maslach & Jackson, 1981). The frequency aspect of the MBI was deemed sensitive enough to capture the burnout experience, therefore; the scoring of the MBI was later modified by the authors to include the measurement of frequency of items only, rather than both frequency and severity. The modified MBI is psychometrically sound and is being used in research studies instead of the original MBI (Maslach & Jackson, 1999; Maslach, Jackson, & Leiter, 2005; & ToppinenTanner et al., 2005) and was used as such for the purpose of this research to assess nurses' burnout.

The three components of the burnout scale, Emotional Exhaustion, Depersonalization, and Personal Accomplishment, are assessed separately from each other (no total score), as relationships among three components have not been understood fully yet (Maslach, et al., 2005).

Index of Work Satisfaction (IWS)

The IWS was first developed in the 1970's and has since evolved through series of refinements (Stamps, 1997). The scale has two sections. Section 1 includes paired comparisons of the importance of pairs of the major components of the IWS to the user. For example: Professional Status and Organizational policies are a pair. The nurse is to rate which component is more important to his/her job satisfaction. The paired comparisons section was not used in this study because it is more geared toward the institutional use of the instrument. Section 2 contains 44 seven-point Likert-scale items that assess the nurse's responses from strong agreement (a score of 1) to strong disagreement (a score of 7). Half of the items are positively while the other half is negatively worded. Conversions were made to unify scoring of the responses so as to indicate higher satisfaction with a higher score of items using the conversion instructions in the instrument's manual (Stamps, 1997). High job satisfaction was indicated by scoring high on positively worded items, low scores on negatively worded items or both. On the other hand, low job satisfaction was indicated by low scores on positively worded items, high scores on the negatively worded items or both. The questionnaire assesses job satisfaction among nurses in six different areas: pay, autonomy, task requirements, organizational policies, interaction, and professional status. Overall reliability analysis of

the IWS showed a Chronbach's alpha of 0.91. Subscale specific alphas were: pay (0.85), autonomy (0.69), task requirements (0.69), organizational policies (0.83), professional status (0.76), and interaction had an alpha of 0.82) (Stamps). The instrument's validity was reestablished in the form of a factor analysis which supported the previous revisions of the instrument. The IWS has been used numerous times for clinical and administrative purposes and was found to be a valid and reliable measure of nurse job satisfaction (Best & Thurston, 2004; Allen & Vitale-Nolen, 2005; and Manojlovich, 2005).

Procedure

A University of Minnesota Institutional Review Board (IRB) approval (Appendix A.6) was obtained prior to starting data collection. Each survey packet included a face-page consent form (Appendix A.1) as required by the IRB. Consent form was provided for information purposes only since the study was exempt from full review and actual signatures were not required. Participants' completion of the survey was considered sufficient consent. Approval from the administration and the nursing research council at the target institution were obtained prior to starting data collection (Appendix A.7).

Recruitment started by sending email invitations and posting recruitment flyers to target pediatric units. The researcher used individual unit's collective email address, not the individual nurses' emails to enhance privacy. Both electronic and flyer methods carried identical information including the purpose of the study, the investigator's credentials and contact information, a website address for completing the survey online, instructions how to complete the survey, and how to return completed surveys. Online survey participants viewed an electronic version of the consent form before starting the

survey and clicked on “agree” button to the same consent form before they could go further to answer questions.

Data were collected using a traditional paper and pencil survey as well as an online survey was hosted on a major survey hosting company’s website for participants to access at their convenience. Both methods were used to maximize participation due to nurses’ busy working schedules and the possibility that a number of the paper surveys might get lost or misplaced. Moreover, online surveys are easily accessible to the nurses in these units as they have internet and email access at work. With the online survey format they are also able to access it from home internet connection and complete it at their discretion.

The three main instruments within the survey (RGEI, MBI, and IWS) were shuffled. The result was distributing six uniquely arranged surveys (protocols). The purpose of shuffling the survey instruments was to control the bias one instrument might have on the others depending on its order in the survey packet, specifically, limiting the bias of the RGEI so that respondents who have experienced strong feelings following the death of their patients have an equal chance of expressing those feelings without a possible bias on their responses to the other two instruments. The online survey was in one format where the RGEI was in the end of the protocol which couldn’t be changed due to programming limitations in the online application. There were 33 online responders while paper-and-pencil was divided among five different protocols that ranged between 15-21 surveys returned in each protocol. Table 3.2 includes all alternatives of survey order used for data collections. Equal numbers of packets were compiled for each

protocol. Upon distribution of surveys, equal number of each protocol was given to each unit.

Order→ Protocol #	0	1	2	3	4	No. of Copies
1	Consent	RGEI	MBI	IWS	DIF ²	40
2	Consent	RGEI	IWS	MBI	DIF	40
3	Consent	MBI	RGEI	IWS	DIF	40
4	Consent	MBI	IWS	RGEI	DIF	40
5	Consent	IWS	RGEI	MBI	DIF	40
6 (Online)	Consent	IWS	MBI	RGEI	DIF	online
TOTAL						200

(Table 3.2) Paper-pencil instrument shuffling protocols.

Upon returning completed surveys, each participant received a \$10 gift card as an incentive and to offset participants' time commitment. All participants were eligible and opted to be included in a drawing for two \$50 gift cards. A raffle for the two \$50 gift cards was done at the end of data collection. Each participant had an equal opportunity to be entered into the raffle. Entry required a mechanism of notifying the winners such as an email address and phone number. However, no personal information was required for completing the survey itself or be eligible to participate in the study.

Ethical Considerations

Research on this topic posed some ethical issues for participants involved in this research process. Remembering a death experience may have lead to emotional distress to nurses in the form of flashbacks which may have awakened feelings of unresolved grief. A section in the consent form addressed this potential ethical issue and directed participants to available institutional programs such as Employee Assistance Programs

² Demographic Information Form

and to contact their primary care provider for consultation if they felt emotionally distressed due to participating in the current study.

Asking nurses about their level of job satisfaction and feelings of burnout had a potential to trigger underreporting or over reporting of these aspects due to any possible conflicts with or oversight by management at unit or hospital level as well as fear of privacy violation. Eligible participants were reassured that no individual identifying information would be shared with managers, nor any individual results will be identifiable by unit or hospital management. It was stated clearly in the consent form that privacy and confidentiality would be maintained and records would not be shared with any third party and would be used only for the sole purpose of conducting this research. It was also made clear to participants that any report resulting from the study would only contain result from an aggregate group response and not from an individual participant. As a safeguard for potential privacy violation, there were no by-unit comparisons in grief, job satisfaction, burnout, or intentions to leave.

Data security online when using web-based surveys has the potential of undermining participant's privacy. Respondents were not asked to include any individually identifying information while taking the questionnaires on paper or online. The researcher utilized a reputable online survey provider with sufficient security safeguards (Survey Monkey Inc., 2009). The survey provider did not have any rights to keeping or using the data collected through this research project.

Finally, some participants might have felt uneasy if they were asked to provide contact information in order to enter a raffle. These participants had the right and the

option not to give any contact information by opting out of the raffle. Those who choose to give contact email or phone number were assured that their information would be kept in a safe and secure place. Their contact information would remain confidential and would not be used for any other purpose other than notifying the raffle winners.

Therefore, minimal participants' personal information, such as email address for future contact, was optional and provided by participants who desired a chance in the drawing of two \$50.00 gift card after the conclusion of data collection. Documents containing any participants' personal information were destroyed following the drawing. Collected data were kept in a locked cabinet where only the researcher had access to them. Data that were collected electronically is backed up on a password-protected server location.

Chapter 4

DATA ANALYSIS PLAN

Quantitative data were entered, cleaned and analyzed using the Statistical Package for Social Sciences (SPSS) version 17.0. The analysis plan focused on finding answers for the research questions that are detailed in chapter 1. The results follow the order of the research questions as they appeared in chapter 1.

Descriptive statistics addressed specific aim 1 and research questions 1, 2 and 3 which described the nurses' grief scores on the RGEI, burnout scores on the MBI, and job satisfaction scores on the IWS (Table 4.1). Descriptive statistics including means and standard deviations were conducted to describe participants' major demographic characteristics and attributes. Frequency distributions of the grief, burnout, and job satisfaction scores (total and subscales) were conducted to present distributions and skew of the data to determine whether data were normally distributed or not, which could determine the types of statistical tests to follow.

Comparative statistics such as independent-sample *t* test and one-way ANOVA were used to find differences among different groups (based on either two or more independent characteristic variables) within the sample based on gender, age, clinical experience, and unit type. The comparative analysis addressed specific aim 1; questions 6 and 7; and hypotheses 6 and 7.

Correlational statistics were conducted to examine relationships among grief, burnout, and job satisfaction scores. Correlational analysis addressed specific aim 2; questions 4 and 5; and hypotheses 4 and 5. Two different correlation tests were used

depending on the type of variables (continuous or categorical) and their frequency distributions (normal or non-normal). For normally distributed continuous variables, Pearson’s product-moment correlation coefficient r was used. For non-normally distributed continuous variables, Spearman’s coefficient r_s was calculated (Spatz, 2008).

Multivariate associations were assessed using multiple regression analyses, depending on the number of independent variables used to explain a dependent variable (Polit and Beck, 2004), to find potentially significant explanation of other study variables by the RGEI Grief scores. This method addressed specific aim 2; question 4 and 5; and hypotheses 4 and 5. Regression analyses examined the hypothesis that participants’ higher grief scores were associated with higher burnout and lower job satisfaction scores.

Statistical Method	Tests used	Specific Aim addressed	Question & Hypothesis addressed	Variables tested
Descriptive	Mean, SD, frequency distributions.	specific aim 1	Questions 1, 2, 3 Hypotheses 1, 2, 3	Total and subscales of: RGEI grief score MBI burnout scores (subscales only) IWS job satisfaction scores Demographic data
Comparative	t-test and ANOVA	specific aim 1	Question 6, 7 Hypothesis 6, 7	Total and subscales: Variability in RGEI grief score by groups based on demographics, i.e. age, nursing experience, # of patient deaths etc.
Correlational	Parametric: Pearson r Non-Parametric: Spearman r_s	Specific aim 2	Questions 4, 5 Hypotheses 4, 5	Total and subscales of: RGEI grief score MBI burnout scores (subscales only) IWS job satisfaction scores Environmental variables
Multivariate Associations	Linear multiple regressions	Specific aim 2	Questions 4, 5 Hypotheses 4, 5	Independent variable: RGEI grief score Dependent variables: MBI burnout scores, IWS job satisfaction scores Controlled/adjusted variables: demographics.

Table 4.1: Analysis plan summary

Summary of analysis plan

Table 4.1 summarizes the analysis plan based on the specific aims and research questions in light of the proposed direction of the relationships between variables in the hypotheses and the conceptual framework.

Instruments' psychometric properties

Tests of the psychometric properties of the study instruments were performed using the data collected for this study. These measures were compared to published psychometrics based on the authors' original data. Table 4.2 shows that the psychometric properties of the RGEI, MBI, and IWS have relatively high Chronbach's alpha coefficients and are comparable to the alphas obtained by the original authors and designers of the instruments. The only considerable difference was seen in the Chronbach's alpha of the RGEI's guilt subscale ($\alpha = 0.59$) as opposed to the original study ($\alpha = 0.72$). This subscale included only 3 questions.

Instrument/Subscale	Chronbach's alphas Values	
	Study Sample N=120	Original
RGEI		(N=418)
RGEI total score	0.94	Not available
RGEI-ET	0.84	0.87
RGEI-Dep	0.85	0.80
RGEI- Glt (3 items)	0.59	0.72
RGEI-PD	0.85	0.83
MBI: Total score not calculated per authors		(N=1,316)
MBI-PA	0.75	0.71
MBI-EE	0.88	0.90
MBI-DP	0.74	0.79
IWS:		(N=246)
IWS total score	0.89	0.91
IWS-Pay	0.80	0.85
IWS-Au	0.75	0.69
IWS-TR	.054	0.69
IWS-OP	0.70	0.83
IWS-PS	0.60	0.76
IWS-Int	0.79	0.82

(Table 4.2) Psychometrics of study instruments compared to original instruments'.

RESULTS

Sample Description

One hundred twenty (120) pediatric registered nurses (RN) participated in this study. Paper-and-pencil surveys were returned by 87 participants (72.5%) and 33 surveys (27.5%) were submitted online. The response rate to the survey was 56% among all 214 eligible RN's in the same institution. Participants practiced on four specialized high-acuity pediatric patient care units including a pediatric intensive care unit (PICU) at a large Midwestern Academic Medical Center. The sample included 108 RN's who consistently worked at the same units, 11 float pool nurses (FP), and one advanced practice nurse.

Participants' ages ranged from 23-62 years (\bar{x} =34 years, SD=10 yrs). The majority of participants were females (n=114, 95%) and identified themselves as white (n=117, 98%). Their academic qualifications included the following: associate degree (n=22, 18%), baccalaureate degree (n=91, 76%), master's degree (n=7, 6%); and 12 participants (10%) were certified in a nursing specialty. Participants' overall clinical experience ranged from one to 40 years (\bar{x} =8.9, SD=9.1). Their pediatric nursing experience ranged from one to 36 years (\bar{x} =8.5, SD=8.6). Forty seven participants (39%) reported that they were single, 69 (58%) married, and four (3%) were separated or divorced. Detailed participants' demographic characteristics are in Appendix B, tables B.1 and B.2.

Adverse Life Events

Participants provided information on adverse life events that they had experienced during the 12-month period prior to their participation in the study. A death in the immediate family was reported by 16% (n=19), a diagnosis of cancer in the family by 25% (n=30), a diagnosis of other major illness³ in the family by 25% (n=30), a divorce or separation by 3% (n=4), and another major loss by 5% (n=6). The number of adverse events was tallied for each participant and used as a unit of measurement for the number of adverse events in relation to other variables in the analysis (Table 5.1).

Totals Adverse Life Events	N	%
0 events	69	58
1 event	20	17
2 events	25	21
3 events	5	4
4 events	1	0.8

(Table 5.1) Total numbers of adverse life events.

Experience with patient's death

Participants reported details about their experience with patients' deaths. One of the survey questions was: *In the past 12 months, approximately how many patients have died on your unit?* When compared to the official institutional numbers of patients' deaths, participants reported higher numbers of patients who had actually died than those reported by the official record. This discrepancy is attributable to participants including all patients whom they had known and taken care of—some of whom may have passed away after being discharged to their home or to hospice care settings in addition to

³ There may have been some confusion in response to this question, on diagnosis of major illness, among participants. It received the same number of responses as the question that asked about diagnosis of cancer in the family. Participants may have answered this questions the same way they did the cancer diagnosis since cancer is a major diagnosis as well. This could have been avoided is the major illness question was formatted as follows: In the last twelve months has there been a diagnosis of major illness in your family other than cancer? ___ Yes, ___ No.

patients who had died in the in-patient hospital setting. The numbers provided by the organization's medical records represent the actual patients who died in hospital units and were discharged from the hospital as deceased. The total number of deaths on pediatric units according to the organization's medical record in the 12-month period before data collection started (November 1st, 2008 to October, 31st, 2009) was 37 (Gastonguay, 2010), while participants estimated the number of patients' death on their individual patient care unit at a range of zero to 40 perceived patients' deaths ($\bar{x}=13$, $SD=9$) in the same period of time.

The closeness of the nurse to the patients who died was assessed by asking nurses if they served as primary nurses to those patients and whether or not they had cared for any patient on or around the day they had died. The results showed that 47 participants (39%) reported that they had served as primary nurses for one or more patients before they had died during the prior 12 months. At least 68% (n=82) of participants reported that they had cared for a patient on or around the day the patient died in the past 12 months. Following the death of their patients, 114 participants (95%) reported that they had shared their feelings about their patient's death with one or more people around them; 103 (86%) shared feelings with a nursing colleague, 80 (67%) with a spouse or significant other, 74 (63%) with a friend, 22 (18%) with parents/siblings, and only two participants (1.8%) reported sharing their feelings with a therapist or counselor provided by their organization. All instances of sharing feelings regarding the patient death experience were added together to obtain a total number of persons with whom participants shared feelings. The majority (n=96, 80%) shared their feelings with two to

three others around them. The majority of those who shared feelings with others (n=111, 92%) reported that sharing feelings was somewhat or very helpful to them.

Grief Experience

The RGEI measured participants’ grief experience by means of 22 Likert-scale statements that ranked from 1=strongly disagree to 5=strongly agree. A participant could have a maximum of 110 possible score points (5 points × 22 items=110 points).

Frequency distribution graphs are detailed in Appendix C, Figures C.1-C.6. Descriptive characteristics of the total and subscale scores of the grief scores are summarized in table 5.2 and are compared to the actual results of the total as well as subscale scores from the validation study (Lev, et al., 1993). Total grief scores were normally distributed (Appendix C, figure C.1).

	Subscales→	Existential Tension (30max)	Depression (30max)	Guilt (15max)	Physical Distress (42max)	Total Grief Score (110max)
Current Study (N=120)	Min-Max	6-28	6-29	3-14	7-32	22-94
	\bar{x}	11.13	14.92	7.32	15.09	48.29
	SD	4.8	7.56	2.76	6.30	17.77
Validation Study (N=418)	Min-Max	--	--	--	--	--
	\bar{x}	20.1	23	10	22.5	75.5
	SD	8.5	7	4.6	9.3	25.7

(Table 5.2) Comparison of study to normative data on RGEI (Lev. et. al, 1993) and its subscales.

The RGEI existential tension subscale consisted of six statements such as, after the death of my patient, ‘I feel lost and helpless’ and ‘Life loses its meaning for me’.

Results of this subscale are summarized in table 5.2. Frequency distribution of scores is skewed to the left (Appendix C, figure C.2), indicating a tendency for lower existential tension scores among participants.

The RGEI depression subscale consisted of six statements such as, ‘I tend to cry easily’, and ‘Small problems seem overwhelming’. Results of this subscale are summarized in table 5.5. Scores have a near-normal distribution but slightly skewed to the left (Appendix C, figure C.3), indicating a tendency to lower depression scores among participants.

The RGEI guilt subscale consisted of three statements such as, ‘I have feelings of guilt because of the death of my patient’, and ‘I frequently experience angry feelings’. Results of this subscale are summarized in table 5.5. Scores are normally distributed with a tendency for clustering of scores around even values (Appendix C, figure C.4).

Finally, the RGEI physical distress subscale consisted of seven statements such as, ‘My arms and legs feel very heavy’, and ‘I seem to lose my energy’. Results of this subscale are summarized in table 5.5. Scores are skewed to the lower end of the scale, indicating a tendency for lower experience with physical distress among participants (Appendix C, figure C.5).

Burnout Experience

Scoring of the MBI is done individually by subscale where there is no total calculated for all three subscales as total burnout score. The reason is that the full relationships among the three concepts of personal accomplishment, emotional exhaustion, and depersonalization is not fully understood (Maslach, et al., 2005). Nominal levels of high, moderate and low are based on the authors’ predetermined score ranges. These score ranges are detailed in table 5.3. It is important to note that personal

accomplishment scores are in opposite direction of emotional exhaustion and depersonalization scores.

Personal Accomplishment (PA)

The MBI personal accomplishment subscale consisted of eight Likert-scale statements. The frequency of occurrence was rated by participants from 0=Never to 6=everyday. Examples of a the PA subscale are: ‘I can easily understand how my patients feel about things’, and ‘In my work, I deal with emotional problems very calmly’. Summary of the personal accomplishment subscale scores are presented in table 5.4 and frequency distributions are presented in in Appendix D, figure D.1.

	Personal Accomplishment	Emotional Exhaustion	Depersonalization
High burnout	0-31	27 or over	13 or over
Moderate burnout	32-38	17-26	7-12
Low burnout	39 or over	0-16	0-6

(Table 5.3) Score ranges of burnout levels (Maslach et al., 2005)

Unlike the two other subscales of the MBI, the personal accomplishments subscale items are positively worded, thus, higher PA scores indicate lower burnout. Figure D.1 in Appendix D shows a skewed distribution of the PA scores among participants of the current study toward the higher end of possible scores, indicating a high sense of personal accomplishment, therefore, less burnout among the study participants.

Groups Compared	Descriptive	Personal Accomplishment (Max: 48)	Emotional Exhaustion (Max: 56)	Depersonalization (Max: 30)
Current study (N=120)	Min-Max \bar{x} SD Burnout Level	13-48 38 5.7 Moderate	5-45 21 8.58 Moderate	0-19 5.8 4.7 Low
Nurses/Physicians (N=1104)	Min-Max \bar{x} SD Burnout Level	-- 36.5 7.34 Moderate	-- 22 9.53 Moderate	-- 7 5.22 Low
Overall human service sample (N=11,067)	Min-Max \bar{x} SD Burnout Level	-- 34.6 7.11 Moderate	-- 21 10.75 Moderate	-- 8.7 5.89 Low

(Table 5.4) Current study compared to normative data of MBI subscales (Maslach, et al., 2005).

Table 5.4 shows that the mean personal accomplishment scores of the current study participants indicate a moderate level of burnout but their personal accomplishment scores are slightly higher than their nurse and physician counterparts in the validation study (N=1104) and higher than those of the overall sample of human service professionals (N=11,067).

Emotional Exhaustion (EE)

The MBI emotional exhaustion subscale consisted of of nine Likert-scale statements with the same 0-6 rating as the above subscale. Examples of the emotional exhaustion subscale statements are: ‘I feel emotionally drained from my work’, and ‘I feel like I am at the end of my rope’. A summary of the emotional exhaustion subscale is presented in table 5.4, with participants’ mean score being within the moderate level of burnout. However, their emotional exhaustion mean scores are close to those of the overall sample of human service workers of the validation study (N=11,067) and slightly lower than nurse/physician counterparts of the same validation study (N=1104).

Frequency distributions of the emotional exhaustion subscale scores (Appendix D, figure D.2) show near-normal distribution among participants of the current study.

Depersonalization (DP)

The MBI depersonalization subscale consisted of five Likert-scale statements, rated from 0-6. Examples of the depersonalization subscale statements are: 'I feel that I treat some patients as if they were impersonal objects', and 'I don't really care what happens to some patients'. A summary of the depersonalization subscale scores are presented in table 5.4, where the mean score of the current study participants fell within the low burnout level. This mean score, however, is lower than that of the validation study's nurse/physician group as well as the entire sample of all human service professionals of the same study, indicating possible lower level of burnout among the current study participants. The frequency distribution of the depersonalization subscale scores (Appendix D, Figure D.3) is skewed to the left toward lower values of depersonalizations, giving the impression that the participants are experiencing less depersonalization in their practice.

Job Satisfaction

The Index of work satisfaction (IWS) for nurses consists of 44 Likert scale items with ratings ranging from 1=strongly agree to 7=strongly disagree. Higher total scores on the IWS scale indicate higher reported job satisfaction and low total scores indicate lower job satisfaction. Half of the items (n=22) were worded in favorable or positive language such as, 'It makes me proud to talk with others about what I do on my job'. The other

half of the items (n=22) was worded in an unfavorable or negative language, such as, 'Administrative decisions at this hospital interfere too much with patient care'. Therefore, positively worded items were inversely recoded to reflect the nature of the scale measurement in order to achieve the scoring goal of high score equals high satisfaction and low score equals low satisfaction. The scale used in the current study is part B of a two-part instrument developed by the original author (Stamps, 1997). Part A, which involves prioritizing and arranging in order of importance different combinations of the IWS 6 subscales, was not used because the researcher's interest was in the total numeric score of the IWS rather than the individual subscale scores and the fact that part A is often used for institutional purposes in evaluating staff job satisfaction. Job satisfaction subscales' descriptive attributes are detailed in table 5.5 and are listed for reference only and have not been used in further analysis such as correlations and regression analysis. Normative data on this section are also presented for comparison between the current study and the validation study by Stamps (1997).

For the purpose and scope of the present study, only job satisfaction total scores were used in further analyses. The frequency distribution of total job satisfaction scores are illustrated in Appendix E, figure E.1 and show a normal distribution. The mean job satisfaction score of the current study is near the upper third of maximum score possible while the comparison validation study scores are well within the middle third of the maximum scores, indicating higher satisfaction among the current study participants (Table 5.5). Descriptive characteristics of the six job satisfaction subscales are displayed in table 5.5 and frequency distributions are illustrated in Appendix E, figures E.2-E.7.

Frequency distribution figures E.2-E.7 show normal to near-normal distributions among the subscales with tendency for skew toward the higher end of the satisfaction scale.

IWS Scale/subscale	Max possible scores	Descriptive analysis Current Study				Validation study Stamps (1997)			
		Min	Max	\bar{x}	SD	Min	Max	\bar{x}	SD
Pay	42	6	38	24.67	5.8	6	42	16.2	--
Autonomy	56	21	51	36.81	6.7	8	56	35.2	--
Task requirements	42	7	37	20.88	5.2	6	42	16.8	--
Organizational policies	49	6	36	16.7	5.4	7	49	19.6	--
Professional status	49	22	49	40.80	4.5	7	49	37.8	--
Interactions	70	26	68	51.11	7.6	10	70	46	--
IWS total	308	120	240	190.97	24	--	--	171.6	--

Table 5.5: descriptive attributes of IWS total and subscale scores for current study and validation study (Stamps, 1997).

Correlations

Correlation between Grief and Burnout

Total scores of the RGEI and its subscales could not be correlated with totals of the burnout scores because of the nature of the MBI subscales that does not allow for a total MBI score (Maslach, 2005). A significant negative correlation was found between the RGEI total score and the MBI personal accomplishment subscale ($r = -0.244$, $p = .009$). A significant positive correlation was found between total grief scores and burnout's emotional exhaustion subscale ($r = 0.38$, $p < 0.001$). Furthermore, the analysis revealed a significant positive correlation between the RGEI total scores and MBI depersonalization subscale ($r = 0.19$, $p = 0.04$). Most RGEI subscales are also individually correlated to the subscales of the MBI subscales in the same direction of the total RGEI scores. Table 5.6 summarizes correlations among the three core variables.

		Total RGEI	MBI-PA	MBI-EE	MBI-DP
Total RGEI	<i>r</i>		-0.244	0.381	0.192
	<i>p</i>		0.009	<.001	0.042
MBI-PA	<i>r</i>	-0.244			
	<i>p</i>	0.009			
MBI-EE	<i>r</i>	0.381			
	<i>p</i>	<.001			
MBI-DP	<i>r</i>	0.192			
	<i>p</i>	0.042			
Total IWS	<i>r</i>	-0.29	0.238	-0.464	-0.358
	<i>p</i>	0.002	0.009	<.001	<.001

(Table 5.6) correlations matrix among the RGEI, MBI, & IWS

Correlation between Grief and Job Satisfaction

Significant moderate negative correlation was found between grief total scores and the IWS total scores ($r=-0.29$, $p=0.002$).

Correlations between Burnout and Job Satisfaction

A significant positive correlation was found between total job satisfaction scores and burnout's personal accomplishment subscale ($r = 0.24$, $p = 0.009$). Another strong and significant yet negative correlation between total job satisfaction scores and burnout's emotional exhaustion subscale ($r = -0.46$, $p < 0.001$). Moreover, strong negative correlation between total job satisfaction scores and burnout's depersonalization subscale scores ($r=-0.36$, $p<0.001$).

Core Variables' Correlations with Demographic, Environmental variables

Participants' demographic and environmental variables that were examined included: age, gender, years of nursing experience, years of pediatric experience, personal loss, exposure to patient death, patient's age at time of death, time elapsed since patient death, being a primary nurse to the patient, and length of time the participant knew the patient before s/he had died. These environmental variables were the focus of

several studies as factors related to how nurses experienced and coped with grief. Zander and Hutton (2009) listed experience, relationship, organizational workplace and boundaries as major themes used by nurses to help them in coping with grief. Other variables were suggested as relevant included patient's age, frequency of exposure to death, professional role and type of death (Valante & Saunders, 2002). The current study adapted the demographic information form (DIF) that was originally developed and used by Feldstein and Buschman-Gemma (1995), which included many of the demographic and environmental variables used in the current study.

The degree of exposure to patients' deaths in the 12 months leading to participating in the study was measured from three angles: 1) the total number of patients deaths on a particular unit as reported by the participant, 2) the number of a participant's primary patients who died in the same period, and 3) the number of patients the nurse cared for on or around the day they died. The frequency distributions of the numbers of patients' deaths as reported by the participants represented as a near-normal distribution. Pearson's correlation was used to analyze this normally distributed variable. Due to non-normal distribution of the reported numbers of primary patients' deaths among participants and the numbers of patients cared for on or around the day they died, a Spearman's correlation method was used. Using this nonparametric correlations measure, the analysis revealed a statistically significant positive correlation between the number of primary patients' deaths and the RGEI's total scores ($r=0.21$, $p=0.026$) and all of its subscales except physical distress as follows: emotional exhaustion ($r=0.18$, $p=0.047$), depression ($r=0.24$, $p=0.01$), and guilt ($r=0.19$, $p=0.039$). Moreover, the RGEI total

scores were not significantly correlated with the number of patients cared for on or around the day they had died. The guilt subscale, however, was negatively correlated with the numbers of patients the participant had cared for around the time of death in the previous 12 months ($r=-0.19$, $p=0.04$).

No statistically significant correlations were identified between the total number of patient's deaths, perceived by participants, in past 12 months, how recent the latest death was and the RGEI's total scores or its four subscales.

Correlations of demographic variables with grief, burnout, and job satisfaction were also examined, yielding the following results. The participant's age had no significant correlations with grief, burnout, or their respective subscale scores. No significant differences were found when comparing groups based on gender. The number of male participants was too small ($n=6$, 5%) to compare to females to draw a statistical conclusion. The analysis did not show any significant correlations between either participant's length of experience in nursing in general or in pediatric nursing in particular and any of the grief, burnout, or job satisfaction scores, including their respective subscales. The job satisfaction's task requirements subscale was the only one correlated negatively with length of nursing ($r=-0.19$, $r=0.04$) and pediatric experience ($r=-0.18$, $r=0.049$).

Personal loss among participants was examined, as part of the environmental variables that could be related to grief, burnout, and job satisfaction. Personal loss was measured as the total number of adverse events that may have triggered grief or grief-like feelings in the 12-month period prior to participating in the present study. The total

number of “Yes” responses to five personal concurrent loss-related questions in the demographic section, including: death of a family member, diagnosis of cancer in family, diagnosis of major illness in family, separation/divorce from spouse/significant other, and other perceived loss. The total number of adverse life events was computed into one variable, named number of adverse events. Due to the non-normal distribution of the numbers of the adverse life events among participants, a nonparametric statistical alternative was used for this piece of the analysis. Using Spearman’s correlation, the number adverse events score did not reveal any significant correlations with grief, burnout, or job satisfaction total scores or subscales as applicable.

Other relevant environmental variables’ significant correlations included the following: average age of youngest patient who died was significantly correlated with the burnout’s depersonalization subscale ($r=-0.22$, $p=0.03$), average period the nurse knew the patient before they died and grief’s guilt scores ($r=0.20$, $p=0.044$), and the participants’ perception that sharing feelings about patient death is helpful was positively correlated with their burnout’s emotional exhaustion subscale scores ($r=0.18$, $p=0.047$). The participants’ grief total and subscale scores were positively correlated with the length of time they knew a patient before s/he had died; for example: a moderate correlation was found with existential tension ($r=0.26$, $p=0.008$) and a stronger correlation was found with the total grief score ($r=0.34$, $p=0.001$).

Finally, the type of patient care unit was examined as a relevant factor interacting with any of the study core variables. Analysis of variance (ANOVA) revealed that the only significant differences between the five groups, representing the five participants’

patient care units, was found in the total IWS scores ($df=5$, $F=2.45$, $p=0.038$), indicating differences among units in their levels of overall job satisfaction. No other statistically significant differences in grief or burnout scores were identified based on type of patient care unit.

Regression Analysis

Multiple regression analysis was used to further examine relationships among variables based on previously established significant correlations among these variables as illustrated in the sections above. The stepwise method was selected over the all-at-once entry of independent variables into regression models avoid scattering of the variances which could result in the inability to capture significant relationships otherwise captured using the stepwise method. Regression results are summarized table 5.7.

Regression models were created using total grief scores and the four subscales of the RGEI (Existential Tension, Depression, Guilt, and Physical Distress), three MBI subscales (Emotional Exhaustion, Depersonalization, and Personal Accomplishment), and the total score of the IWS. All variables that are correlated with these subscales were entered into regression models using stepwise process, where each of the subscales was entered as dependent variables and all other correlates with a p -value < 0.1 were entered as candidate independent variables in the model. Table 5.7 contains each criterion and the significant predictors demonstrated by the regression model.

Dependent variables	Associated Independent/ variables	Beta Coefficients				Adjusted R ²	<i>p</i> (variable)	<i>P</i> (Model)
		Unstd.	Std	SE Beta	<i>t</i>			
MBI-PA	RGEI-Glt	-0.56	-0.27	0.19	-3.05	0.065	0.003	0.003
MBI-EE	IWS	-0.13	-0.39	0.03	-5.74	0.31	<0.001	<0.001
	RGEI-ET	0.91	0.30	0.27	4.35		0.001	
MBI-DP	IWS	-0.06	-0.36	0.02	-3.9	0.19	<0.001	<0.001
	No. of pt. death	0.13	0.28	0.04	3.10		0.003	
IWS	MBI-EE	-1.45	-0.51	0.25	-5.91	0.26	<0.001	<0.001
RGEI	MBI-EE	0.89	0.41	0.20	4.51		<0.001	<0.001
	Period RN knew pt.	0.12	0.21	0.05	2.33	0.25	0.022	
	# primary pt. died	2.19	0.18	1.09	2.02		0.047	
RGEI-ET	MBI-EE	0.23	0.40	0.05	4.40	0.16	<0.001	<0.001
	# primary pt. died	0.62	0.18	0.30	2.05		.043	
RGEI-Dep	MBI-EE	0.28	0.41	0.06	4.58		<0.001	<0.001
	# primary pt. died	0.98	0.24	0.36	2.75	0.19	0.007	
RGEI-Glt	MBI-EE	0.13	0.38	0.03	4.32		<0.001	<0.001
	Period RN knew pt.	0.02	0.22	0.01	2.44	0.22	0.016	
RGEI-PD	MBI-EE	0.30	0.39	0.07	4.38	0.15	<0.001	<0.001

Table 5.7 Summary of regression analysis results

Regression analysis showed that the RGEI's guilt subscale score explained about 7% of the variance in the MBI's personal accomplishment score (beta = -0.56, p = 0.003). The model involving the IWS total scores and the RGEI's existential tension explained 31% of the variance in the MBI's emotional exhaustion score. Nineteen percent of the variance in the MBI's depersonalization score was explained by the total IWS score (beta=-0.06, p=.001) and the number of perceived patient deaths in the past 12 months (beta=0.13, p=0.003). Twenty six percent of the IWS total score variance was explained by the MBI's emotional exhaustion scores (beta=-1.45, p<0.001). A quarter of grief score variance was predicted by the MBI's emotional exhaustion score (beta=0.89, p<0.001), the length of time the nurse knew the patient before they had died (beta=0.12, p=0.02), and the number of primary patients who died in the previous 12 months (beta=2.19, p=0.047). Other RGEI subscales were similarly explained in the same manner by one or more of the same variable in more detailed regression models as presented in table 5.7.

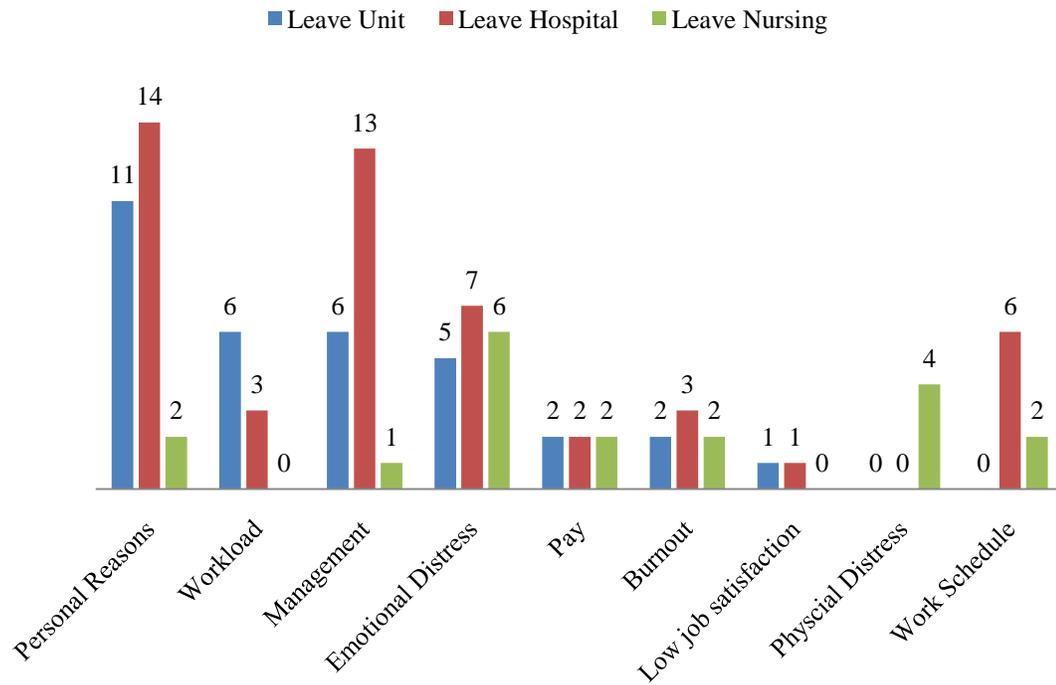
Intention to Leave unit, Organization, Nursing

Participants responded to questions regarding their plans to stay or leave their current units, organization, and nursing as a profession. Thirty five participants (29%) reported having thoughts about transferring to another unit or specialty area within the same organization, 43 (36%) respondents reported having thoughts about leaving the hospital and seeking a job at another institution, and 13 (11%) said they were having thoughts about quitting their nursing job all together. Participants cited various reasons that lead them to have intentions to leave, including reasons related to dealing with patient deaths and work environment reasons. Figure 5.1 outlines frequencies of the major reasons for nurses who intend to leave their current unit, hospital or the nursing profession. These reasons were sorted into major categories such as, personal reasons including family reasons or relocating to another town or state; management-related reasons where participants were not satisfied about the managerial style at their unit; and job related categories including workload, emotional/physical distress, burnout, schedule and pay.

Independent sample t-tests were used to compare participants who reported having thoughts about leaving their current units, hospital, and nursing as a profession, and those who didn't report such intentions. No significant differences were found between the two groups based on their grief total scores or the four subscales of grief. Statistically significant differences between the two groups, however, were found in terms of the MBI and the IWS scores. The group that reported having intentions to leave unit, hospital, or nursing consistently had higher scores on the burnout measure subscales

and lower scores on the job satisfaction total scores and several of its subscales. Detailed results are in tables 5.8, 5.9, and 5.10.

Figure 5.1: Major categories of reasons for intentions to leave



Intention to leave unit			
Scale/Subscale		\bar{x}	p-value
Burnout's Personal Accomplishment	No	38.84	0.013
	Yes	35.90	
Burnout's Emotional Exhaustion	No	19.40	0.001
	Yes	24.90	
Burnout's Depersonalization	No	4.76	<0.001
	Yes	8.23	
Job Satisfaction's Autonomy	No	38.10	0.003
	Yes	34.17	
Job Satisfaction's Organizational Policy	No	17.53	0.02
	Yes	15.09	
Job Satisfaction's Professional Status	No	41.70	0.001
	Yes	38.71	
Job Satisfaction's Interaction	No	52.65	0.001
	Yes	47.66	
Job Satisfaction Total score	No	195.84	0.002
	Yes	180.83	

Table (5.8) Independent sample t-test of MBI, IWS based on intentions to leave unit

Intention to leave hospital			
Scale/Subscale		\bar{x}	p-value
Burnout's Personal Accomplishment	No	38.79	0.049
	Yes	36.58	
Burnout's Emotional Exhaustion	No	19.01	0.001
	Yes	24.56	
Burnout's Depersonalization	No	4.65	0.001
	Yes	7.77	
Job Satisfaction's Autonomy	No	38.04	0.009
	Yes	34.79	
Job Satisfaction's Organizational Policy	No	17.75	0.012
	Yes	15.19	
Job Satisfaction Total score	No	195.15	0.015
	Yes	183.84	

Table (5.9) Independent sample t-test of MBI, IWS scores based on intentions to leave hospital

Intention to leave Nursing			
Scale/Subscale		\bar{x}	p-value
Burnout's Personal Accomplishment	No	38.50	0.04
	Yes	35.08	
Burnout's Emotional Exhaustion	No	20.22	0.033
	Yes	25.70	
Burnout's Depersonalization	No	5.30	0.046
	Yes	8.08	
Job Satisfaction's Pay	No	25.02	0.05
	Yes	21.62	
Job satisfaction's Task Requirements	No	21.36	0.008
	Yes	17.46	
Job satisfaction's Organizational Policy	No	17.22	0.035
	Yes	13.92	
Job satisfaction Total score	No	193.59	0.014
	Yes	176.54	

(Table 5.10) Independent sample t-test of MBI, IWS scores based on intentions to leave nursing

Chapter 6

DISCUSSION

This chapter discusses the major findings of the current study based on the specific aims, questions, and hypothesis. It informs the reader of which hypotheses were supported and which were not. Table 6.1 summarizes the status of the current study hypotheses in terms of being supported or not with relevant notes. The discussion will include where the findings of the current study are congruent with reviewed literature as well as any relevant evidence of statistical relationships among core variables. The flow of this chapter will follow the order of the study specific aims and questions. Figure 6.1 proposes a model of interaction among correlated study variables based on the current study results. It offers a graphic representation of dynamic relationships among these variables. Limitations of the study are discussed in the end of this chapter. The following chapter outlines major study conclusions and recommendations for future research and implication for nursing practice.

Grief and Nurses

The hypothesis stating participants will report varying degrees of grief following the death of their patient was supported. In this homogenous sample of predominantly young white female nurses (\bar{x} =34 years) a near-normal distribution of the grief scores was found, indicating that these participants went through a grieving process akin to that of family members and caregivers of a deceased child. This group of nurses is closely involved in caring for children with various health conditions in a highly acute setting

where they either witness their patients' death personally or learn of their death soon after it happens. The target population, 56% of which participated in the study, is a closely netted group of pediatric nurses with a considerable nursing experience and exposure to patients' death on a regular basis that they often over-estimated the perceived numbers of patients who died as opposed to institutional medical record numbers.

Understandably, participants' grief mean scores as well as grief's subscale mean scores were consistently lower than those of the validation study that used the same instrument to measure grief among family caregivers of patients who had passed away. It's important to note that the group of participants used for the validation study consisted of over 400 family caregivers of the deceased person (Lev, et al., 1993). It is not surprising that nurses' reactions to the death of their patients are not as intense or overreaching as those of the patient's family members. Consistent with many of the studies reviewed above (Brown & Wood, 2009; Feldstein & Buschman-Gemma, 1995; and Papadatou et al., 2002), the current study supports that nurses do grieve, in similar ways yet to a lesser extent than family members, over the death of their patients. The current study demonstrated that nurses' grief scores were near normally distributed indicating a viable range of variable emotional and physical reactions with significant correlations with all aspects of burnout and further suggesting a statistical explanation to burnout's emotional exhaustion aspect. Even though the current literature does not show the direct relationship between grief and emotional exhaustion, it makes clinical as well as scientific sense to establish that those two concepts are closely related to each other. The available literature, though more anecdotal than empirical, supports that nurses' grief

may lead to burnout if not addressed properly (Saunders, 1997; Braccia, 2005; and Brown & Wood, 2009).

Hypotheses two and three were also supported in that the results have shown a near normal distribution of the burnout and job satisfaction total and subscale scores as applicable. This can be interpreted as there is a normal distribution of job satisfaction and burnout among this group of participants that could be correlated with the group's grief experience. In other words, the three study core variables exist in the same setting at the same time which allowed for examining the relationships among them giving the current study an empirical momentum to move on to examine further relationships as seen the discussion on hypotheses four and five below.

#	Hypotheses	Supported	Notes
1	Pediatric nurses will report variable grief levels following the death of their patient(s), indicated by their grief scores.	Yes	Near-normal distribution of grief scores are reported
2	Pediatric nurses will report variable burnout levels, indicated by their MBI scores.	Yes	Near-normal distributions of Burnout subscale scores are reported
3	Pediatric nurses will report variable of job satisfaction levels, indicated by their IWS scores.	Yes	Near-normal distributions of Job Satisfaction scores are reported
4	Participants' grief scores are positively correlated with their burnout scores.	Yes	Directions of correlations: positive with emotional exhaustion, Depersonalization, and negative with personal accomplishment
5	Participants' grief scores are negatively correlated with their job satisfaction	Yes	Supported for correlation with total satisfaction scores as well as most of its subscales.
6	Pediatric nurses who are exposed to more patient deaths report higher grief scores than those who are exposed to fewer deaths during the same time period of time.	Yes	Especially number of primary patients who died is correlated with grief scores.
7	Pediatric nurses who experienced more recent patient deaths report higher grief scores than those who experienced less recent patient deaths.	No	No correlation found, suggesting more cumulative nature of the grieving process.

(Table 6.1) summary of study supported and not supported hypothesis

Hypotheses four and five stating that grief is correlated to both job satisfaction and burnout was also supported. Higher levels of grief and its components are associated positively and even suggest explanations to some components of burnout, i.e. emotional exhaustion. Although their work is largely non-empirical and based on experience and available grief literature (Valante & Saunders, 2002; Braccia, 2005; and Anderson, 2008) have postulated that a connection existed between grief and burnout. The current study findings are in line with previous literature in that there is an interactive relationship between grief and burnout among nurses.

On the other hand, grief and its components were correlated negatively with job satisfaction, which lends support to hypothesis five, but the results of the regression analysis did not show a significant association to suggest an explanation to variability in job satisfaction as a total score among these participants. The emotional exhaustion subscale burnout, which is closely associated with the grief scores, suggests an explanation to the job satisfaction scale. This could be interpreted that even though grief may not relate directly to job satisfaction, it may be doing so through its direct association with burnout. There was no available research-based literature to compare the relationships between grief and job satisfaction as a whole or with its subscales. More detailed analysis is needed to find specific correlations between grief components and specific job satisfaction components that may not have been captured in the current study. It is noteworthy to mention that the positive correlation ($r=0.24$, $p=0.009$) between the MBI's personal accomplishment subscale act as a protective factor in the job satisfaction score. However, despite the negative correlation between grief and personal

accomplishment ($r=0.24$, $p=0.009$), the regression analysis of the current study or the available literature did not suggest that personal accomplishment as one of the significant grief correlates.

Burnout and Nurses

In relation to the burnout level among the participants, the results indicate that they enjoy higher scores of personal accomplishment compared to a larger normative sample of human service professionals (Maslach et al., 2005). They also had lower levels of burnout than their counterparts by demonstrating lower scores on emotional exhaustion and depersonalization subscales. Some of their burnout scores were however, though relatively low, associated with other environmental variables they dealt with on a daily basis. These included their experience with the perceived numbers of patients' deaths on their unit, their feeling of guilt over these deaths, and their personal existential tension felt as a result of these deaths.

Burnout's Personal Accomplishment

Although significant correlations exist between grief, job satisfaction and burnout's personal accomplishment subscale, only grief's guilt subscale has significant association with the burnout's personal accomplishment subscale as shown in the regression model (Table 5.7). This suggests that these nurses are able to continue their professional growth and sense of personal accomplishment in an environment where patients' death may bring about grief and burnout. Despite the emotional and physical hardship the participants may have experienced as a result of their patients' deaths, they were able to maintain their professional sense of accomplishment in what they do to care

for their patients. Another possible explanation could be the presence of coping mechanisms that nurses use such as reflection upon and drawing meaning from their experiences with patient' life and deaths which enables them to continue practicing (Zander & Hutton, 2009). However, if guilt characterizes their reactions to patients' deaths, the results suggest that it is negatively associated with their sense of self personal accomplishment. This could result in a deterioration of the nurse's commitment for the organization as well as providing quality nursing care to their patients (Zander & Hutton, 2009).

Burnout's Emotional Exhaustion

The results indicated that participants' job satisfaction total scores and grief's existential tension subscale score suggested a valid explanation of emotional exhaustion variability. In and of itself, emotional exhaustion is a salient variable that is closely correlated to grief and job satisfaction even though grief and job satisfaction themselves are not closely correlated. This dynamic relationship between the three concepts could be viewed through an interpretation that burnout may be acting as an intermediary force between grief and job satisfaction. Because emotional exhaustion is strongly correlated and suggests partial explanations to both grief and job satisfaction, in spite of finding that grief and job satisfaction per se not suggesting explanations for each other, it may over time show an association with job satisfaction which has been found as one of the reasons for turnover among nurses. Emotional exhaustion was not significantly correlated to job satisfaction among a sample of 52 social workers; it was, however, strongly correlated with their turnover rates (Wright & Cropanzano, 1998).

Burnout's Depersonalization

Grief and job satisfaction seem to have a close association with the burnout's depersonalization subscale in light of their relationship with their clients. Also, the number of patients whom the nurse perceives to have died under her/his care positively suggests an explanation to depersonalization and detachment from her/his patients. Furthermore, significant negative correlation between the patient's age and nurses' depersonalization scores could be viewed as a unique dynamic between nurses and their population in pediatric setting where nurses may be too close to assuming a maternal/paternal-like reaction to their patient's death. This immense emotional situation in such high acuity units could pressure the nurses to dissociate themselves from this relationship by trying to build a stronger professional boundary between themselves and their patients. This is also an area where there could be a dynamic relationship between the three concepts where grief is associated with depersonalization and depersonalization suggests an explanation for job satisfaction.

Job satisfaction and Nurses

This group of nurses showed a high level of job satisfaction with several aspects of their work environment evidenced by the distributions of their specific subscales that are mostly skewed toward the areas of higher job satisfaction. Emotional exhaustion as a component and an indicator of burnout, however, is strongly correlated and provides at least a partial explanation for variability in job satisfaction scores. Emotional exhaustion, which is also partially explained by grief's existential tension, is negatively associated

with job satisfaction y ($\beta = -1.5$) times. This close association between grief, burnout and job satisfaction could suggest a series of interactions that are taking place around or at the same time where a trigger may be initiated by a reaction to patient's death that relates directly to the burnout's aspect of emotional exhaustion which in turn is closely associated with the decline of job satisfaction.

Exposure to patients' death

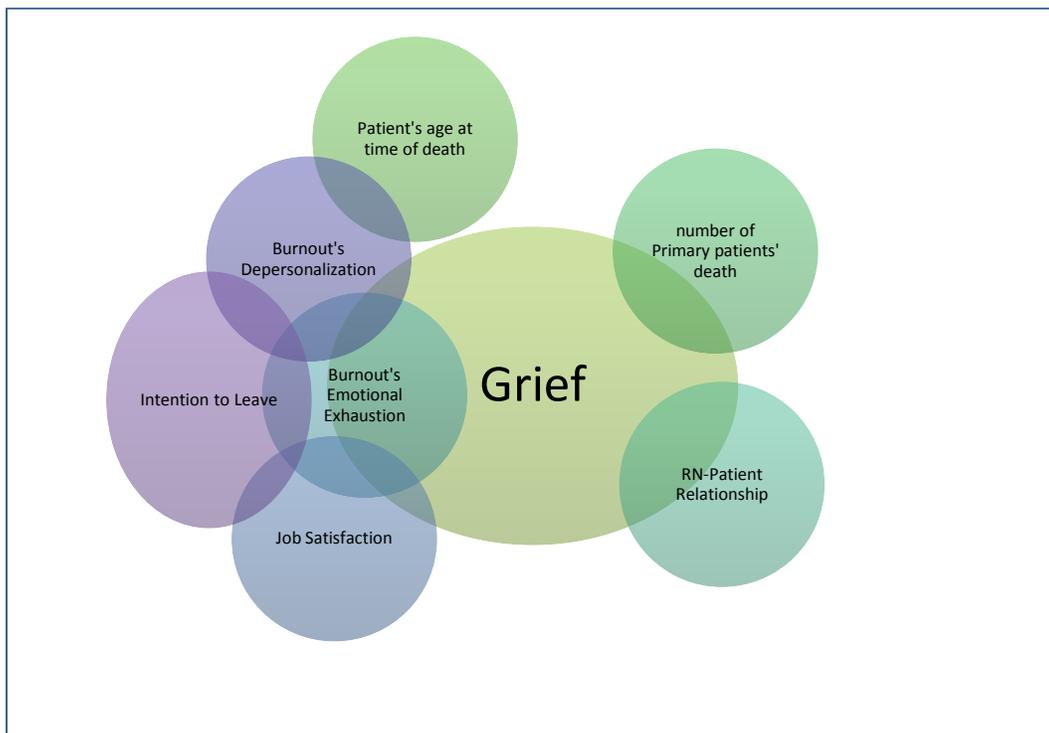
This hypothesis indicated that nurses who experienced more exposure patient deaths will have higher level of grief. The hypothesis was supported. Exposure to patients' deaths was measured in the form of number of patients' deaths in general or participant's own primary patients who had died in the 12 months leading up to their participation in the current study. Also, of special interest, the number of patients cared for around the time of death was correlated with higher participants' scores on their grief's guilt subscales, which could indicate the magnitude of the emotional ramifications of taking care of dying patients specifically around the time of death. This finding could provide empirical support to specific advice given by (Brown & Wood, 2009) who advocated for less assignment of comfort care patients per nurse around the same period of time to help them recover from witnessing and experiencing the death of a patient. This in turn may help in giving the nurses a chance to process their own emotions regarding a particular patient whom they cared for at or around the time they died. The study did not find significant correlation between the overall number of patients' death on a specific participant's unit with their total grief scores or any of its components. This could be interpreted as evidence that the closer the patient-nurse relationship—as in

experiencing a primary patient's death, could have a more significant role in the nurse's reaction to the patient's death than the number of patients' deaths per se.

Recentness of patients' deaths

The hypothesis that more recent deaths would be correlated with higher grief levels was not supported. No significant correlations were found between grief and the time since the last patient's death. A question design issue may have led to inaccurate response to this question. The question asked: *'How long ago was the last patient's death you experienced?'*, which did not emphasize the time frame of the past 12 months, leading to inability of some participants to accurately think of their answer within the 12-month time-frame. The answers ranged from one day to 4 years. Given the long periods of time some participants indicated and the vagueness of the question compared to a more precise question regarding the number of primary patients who may have died within the last 12 months, the intended data have not been captured accurately. Several of the participant comments in the end of the demographic section talked about the cumulative nature of grief in that it does not necessarily occur instantly but it could show up at any time where there is a trigger to facilitate its reappearance. In the same line of findings, Marino (1998) emphasized that grief is a cumulative phenomenon that represents a threat in the nurses' sense of "power, control, and mastery" (p.102) in the work setting. Grief was also seen as a cumulative process by others, however in different terms, chronic and compounded grief, which was yet to be linked to higher turnover rates, known for their role in lower staff morale and cohesion (Feldstein & Buschman-Gemma, 1995).

Another point to consider is the designation of the 12 month timeframe for the study, which was not based on a solid empirical evidence of how grief happens or develops over a period of time. Clinical expertise was the main rationale for choosing reason for the 12 month timeframe, which may or may not have been sensitive enough to the individualized experience of grief (Cowles & Rodgers, 1991).



(Figure 6.1) A model for proposed interactive relationships among study correlates

Figure 6.1 represents the interactions between various study variables based on the results and discussion. Each circle represents a variable or a concept and crossing lines between them mean a significant correlation or a suggested reciprocal statistical explanation. No causal relationships are suggested or implied.

Limitations of the study

Although it was based upon the 102-item Grief Experience Inventory (GEI), which was used on nurses (Sanders, et al., 1985), the Revised Grief Experience Inventory (RGEI) was tested in its validation study on grieving family care givers who had experienced the loss of a loved one. Therefore, its contents could have been more geared toward what is expected of a family to experience. Consequently, the responses of the current study participants are notably distributed toward a lower level of grief which could have had an impact on the results had the instrument been designed with nurses in mind. In the absence of such a nurse-oriented grief measure, the researcher adapted the RGEI while trying to minimize its limitations before starting data collection. A way to minimize this limitation was by offering the tool to a group of potential participants before the study was conducted. Participants provided feedback indicating that even though the RGEI was geared toward caregivers it still related to their experience with patient's death. The majority of the solicited feedback received from nurses was favorable for using the instrument in light of the absence of another a nurse-oriented one.

The Maslach Burnout Inventory is the most widely used burnout measure, which has been used in theory-driven research on the burnout phenomenon. Its multidimensional conceptualization of the concept, although a theoretical strength, represents a limitation at the same time in that these dimensions are understood better when applied to groups of persons. They have not been used, at least for now, to assess burnout among individuals because the instrument does not have well-validated cut-off points for burnout scores (Maslach, Jackson, & Leiter, 1996).

The Index of Work Satisfaction (IWS) is composed of two sections, one of which has only been used for the purpose of the current study. Part A, which was not used, assesses relative importance of the job satisfaction subscale components compared to each other. This is done in a paired comparison method that is later incorporated into the final job satisfaction score. It's unknown if using only the Likert-scale (Part B) section of the measure had any impact on the final scores of the current study participants. With the IWS Author's permission, the researcher used Part B only (Stamps, 2008).

The convenient nature of the sample is a limitation. This limitation is shared by non-experimental designs under which this study falls, where a risk for skewed result may occur because of unequal chances of representation of all participants. The nature of the setting where the current study took place, and the characteristics of the participants suggest overall equal chances among participants for exposure to patients death due to the high acuity of the patient population. Participants cared for these patients in the same setting where patients can be transferred from one unit to another and nurses also could float from their home unit to another in the same setting. In fact, the number of deaths estimated on each unit overlapped with other units because some patients who were transferred from one unit to another and died there were probably counted as belonging to both units. Therefore, the setting and results suggest a collective grief experience lived by closely netted group of nurses in a high acuity setting.

To ensure the appropriateness of the sample size, power analysis was done before conducting the study which took into consideration potentially related variables in the context of this particular clinical setting and incorporated them into the calculation of the

desired sample size. The sample size recommended according to the power analysis was 114, which was exceeded through the recruitment of 120 participants and the response rate of 56% of all eligible participants.

RECOMMENDATIONS AND CONCLUSIONS

Implications for Nursing Practice

Proactive Grief Intervention

The results of the current study suggest steps to be taken to benefit nurses who are immediately involved in direct patient care, especially those who regularly care for dying pediatric patients. An important recommendation based on the literature review and results of the current study is that informal strategies of coping with grief and its consequences, while seen helpful by some nurses, may not be adequate to overcome the emotional as well as the physical aspects of the grieving process. A professional early intervention program for nurses is recommended to be used regularly when a situation calls for grief intervention following a patient's death. Such an intervention program should use qualified counselors who can design and implement such a program and perhaps intervene proactively and even preventatively to ward off potential grief-triggered emotional and or physical aftermath of a patient's death.

Although little is known about them, such programs seem to have helped both nurses and how they dealt with family as well (Fessick, 2007). In this program, Fessick used a six-hour retreat to bring staff together with a certified counselor to discuss and express their feelings and experiences with dying patients and their families and how they tried to cope with this loss. The counselor also provided education on how to cope and

live through the grieving process where the participants were taught to use journaling to document their individual experience and its ramifications following patient death. The end result was that participants felt more uplifted and stronger as they discussed their feelings and expressed more recognition of the impact they have on their patients and families (Fessick, 2007).

Of all nurses who participated in the current study, it was revealed that those who lost a primary patient were experiencing more of the grief issues than others, which was related directly to their burnout's emotional exhaustion. The younger their patients who died were, the more guilt feeling they had as they grieved. Therefore, a specific emphasis on nurses functioning under a primary nursing model, which applies to the majority of this group of participants, need to be made to their guilt feelings and exploring or reinforcing current and possible coping mechanism to maintain a healthy work environment. Based on the current literature, suggestions such as limiting the exposure to dying patients for nurses may help them recover and process the loss in order to resolve the grief and have closure (Brown & Wood, 2009).

Integrated Grief Education

Lack of grief education is widely reported in the grief literature (Rashotte, 1997; Brown & Wood, 2009; and Gerow, et al., 2009). The current study reemphasizes the need to pursue the education aspect of grief. Most urgently, it is imperative to educate nurses how to evaluate and assess their own values toward death and the dying process. This recommendation calls for a much needed grief education program that needs to be set up to help nurses better understand the emotional as well as physical toll of experiencing a

patient's death repeatedly over a period of time. Such a program needs to emphasize learning new coping skills, facilitate seeking formal and informal support, as well as establishing effective professional boundaries. A program that is an integral part of new nurses' orientation could help set the stage for new nurses to deal with a probable future need to cope with patients' deaths. Such grief education should not be limited to practicing nurses. It needs to be expanded to include nursing students and faculty whose practice in the clinical area exposes them to similar grief issues similar to those experienced by staff nurses.

Implications for Future Research

Grief Instrument refinement

The Revised Grief Experience Inventory (RGEI) needs to be refined to better fit the nursing population. It was designed with family caregivers in mind and was only tested on a sample of that population. As emphasized in the discussion above, scores on the RGEI among participants were consistently lower than those of the validation study participants. While the RGEI total and subscale scores managed to capture the grief response among the current study participants, expert feedback can be used to mold the questions in a way that fits the nurses' experience with dying patients. The refined instrument can then be piloted and tested for reliability and validity among a group of nurses. A following stage could be to validate the instrument using a larger sample to ensure that it has sound psychometric properties.

Once the new instrument is developed, it can serve as a basis for grief intervention and education programs where it could be used as a pre and post test measure to evaluate these programs' effectiveness.

Design and Evaluation of a Grief Education

A logical outcome of the current study is to design and evaluate a program of grief education. Design should include state of the art education materials and experts to deliver the program. An interdisciplinary cooperation is necessary to design, implement, and evaluate the effectiveness of such a program.

The impact of such a program on nurses' work-related variables such job satisfaction and burnout would require a longitudinal study to evaluate the effectiveness of grief education in the long-term on nurses' burnout and job satisfaction.

Understanding Coping

A gap is well-documented in studying nurses coping strategies with patient's death. Since coping has been mainly addressed in qualitative designs where participants' experiences were explored, an empirical program based on the coping literature among pediatric nurses is needed to evaluate therapeutic strategies among nurses that can be tested for effectiveness and later used personally to help nurses cope with grief. Some coping strategies suggested by several authors could be subjected to testing (Shorter & Stayt, 2009). Workshop style grief interventions can be tested for effectiveness in a pre and post-test format using the refined grief instrument as well as a newly identified grief-coping instrument.

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Appendix A: Logistics and Research Instruments

Appendix A.1: Consent form

You are invited to be in a research study of pediatric nurses' experience of grief following the death of pediatric patients. You have been selected as a potential participant because you meet the study inclusion criteria. Before you decide to be in the study, I want to tell you about it so you can ask any questions you may have about this study.

This study is be conducted by Jehad Adwan, RN, PhD(c), Clinical Assistant Professor and a PhD student at the University of Minnesota School of Nursing.

Background Information

The purpose of the study is to gain understanding of pediatric nurses' personal experiences of grief following the deaths of their patients. Additionally, the researcher aims at examining the relationships that may exist between nurses' grief and other workplace factors such as their perceived job satisfaction and burnout.

Procedures:

If you agree to be in this study, you are expected to answer a three-part questionnaire in multiple-choice format in addition to demographic information. Time needed to complete the survey ranges between 20-30 minutes.

The following are 3 sample questions from the survey:

1. Have you talked to any person about your experience with death and dying patients?
 Yes No
2. I frequently experience angry feelings (responses range from Strongly Disagree to Strongly Agree)
3. Most people appreciate the importance of nursing care to hospital patients (responses range from Strongly Disagree to Strongly Agree)

Risks and Benefits of being in the Study

The risks of participation: (1) the process of completing the questionnaires may result in an unpleasant state because of past memories about patients who died or those who were terminally ill; and (2) the inconvenience is caused by the time required to complete the survey. There are no direct benefits for you in the study. However, indirectly, you may benefit from an intervention program that may be built on the results of this study. Also, you may benefit from educational activities based on this research in your annual education/competency day.

Compensation:

For agreeing to participate in the study and submitting a completed survey, you will receive a \$10.00 gift card. Additionally, you have the opportunity to enter a raffle to win one of 2 \$50.00 gift cards at the end of data collection.

Confidentiality:

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records. (If tape recordings or videotapes are made, explain who will have access, if they will be used for education purposes, and when they will be erased.)

Confidentiality:

No personally identifying information will be collected about you, and your answers to the questions will be kept confidential and anonymous. The researcher will not include any information in any reports or publication that can identify you personally.

Voluntary nature of the study:

Participation in this study is voluntary. If you choose not to participate, or if you drop out of the study, your relationship with the University of Minnesota or the University of Minnesota Amplatz Children's Hospital will not be affected. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships

Contacts and Questions:

The researcher conducting this study is Jehad Adwan, RN, MSN, a clinical assistant professor and a PhD student at the University of Minnesota School of Nursing and a staff nurse at the University of Minnesota Amplatz Children's Hospital. You may ask any questions you have now. If you have any questions later, you may contact me at (612) 625-0430 or via email: adwan001@umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

You will be given a copy of this form to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

Appendix A.2: Demographic Information Form (DIF)

- Age _____ Yrs. Gender: Male Female

Nursing Experience:

- Total number of years in nursing _____ Yrs.
- Number of years at current organization _____ Yrs.
- Number of years in current position/unit _____ Yrs.
- Pediatric nursing experience _____ Yrs.

Patient Care Unit:

- UMACH 5A
- UMACH 5B
- UMACH 5C
- UMACH 5D
- UMACH Pediatric Float Pool
- Other, specify _____

Academic Qualifications: (highest degree earned)

- 3-year Diploma
- Associate Degree
- Baccalaureate
- Masters/Advanced practice, specialty: _____
- Doctorate, area of research/specialty: _____

Are you certified in a nursing specialty? N Y, Specify: _____

Marital status:

- Single
- Married
- Separated/divorced
- Widowed

Do you have any children? N Y How many? _____

Current living arrangement:

- By myself
- With spouse/Significant other (no children)
- With spouse and children
- With my children
- Other, please specify: _____

Ethnic background:

- Asian
- Black
- Hispanic
- Native American
- White
- Other, please specify: _____

Have you experienced any of the following events during the past 12 months?

- Death in your immediate family: N Y

- Diagnosis of cancer in your family: N Y
- Diagnosis of major illness in your family: N Y
- Divorce or separation from spouse or significant other: N Y
- Other major loss, please specify: _____

Your experience with patients' death in the past 12 months:

- In the past 12 months, approximately how many patients have died on your unit? _____
- Did you serve as a primary nurse to any of these patients? N Y NA
 - If yes, how many patients? _____
- During the past 12 months, did you take care of any patient on or around the day s/he died, or participate in post-death care of the patient or family? N Y NA
 - If Yes, how many patients? _____
 - If No, go to the following section (Sharing your feelings)
- How long ago was the last patient death you've experienced? ___Y ___M ___D
- On your unit, approximately what percentage of patients' deaths is sudden _____%, and what percentage is anticipated _____%?
- Shortest period you had known a patient before s/he died? ___Y ___M ___D
- Longest period you had known a patient before s/he died? ___Y ___M ___D
- Average period you had known a patient before s/he died? ___Y ___M ___D
- Age of youngest patient you had known before s/he died? ___Y ___M ___D
- Age of oldest patient you had known before s/he died? ___Y ___M ___D
- Average age of patients you had known before s/he died? ___Y ___M ___D

Sharing your feelings:

- After a patient of yours dies, do you share your feelings/experience with anyone?
 - Yes
 - No. If No, skip the next 2 questions.
- If yes, is that person a (check all that apply).
 - Nursing colleague
 - Friend
 - Spouse/significant other
 - Therapist/counselor from my institution
 - Other (specify) _____
- I have found talking to others about my feelings to be
 - Very helpful
 - Somewhat helpful
 - Neither helpful nor unhelpful
 - Somewhat unhelpful
 - Very unhelpful
- I am having thoughts about

- Transferring to another unit. N Y. If yes, what specialty? _____
- Transferring to another organization/hospital. N Y
- Quitting nursing and changing careers. N Y

If you selected “yes” to any of the 3 previous items, what is the most likely reason for the change?

Please use the space below to express your personal reflections about your experience with patients’ death and dying. For example, you may tell a story about how this experience affected you as a nurse or as a person. Please use back of the page if you need more space.

Please return the survey to the labeled collection envelope in your unit’s conference room. Please follow these steps to receive your “thank you” gift card:

1. Write your name on the post-it note on the front of the survey.
2. Add your name to the participants’ list taped on the collection envelope.
3. Specify a convenient location and date to receive your gift card.
4. Indicate if you want to enter the raffle for one of two \$50.00 gift cards

Thank you!
Johad Shuman

Appendix A.3: The Revised Grief Experience Inventory (RGEI). Lev, Munro, McCorkle (1993)

The following statements are related to how you feel following the death of your patient(s). Please circle the number indicating your degree of agreement or disagreement with them. There are no right or wrong answers. Please answer ALL items and try to avoid using option 3 if possible.

Key:

- 1= Strongly Disagree (SD)
- 2= Somewhat Disagree (SWD)
- 3= Neither Disagree nor Agree (NDA)
- 4= Somewhat Agree (SWA)
- 5= Strongly Agree (SA)

		SD	SWD	NDA	SWA	SA
	After the death of my patient(s),	1	2	3	4	5
1.	I tend to become more irritable with others	1	2	3	4	5
2.	I frequently experience angry feelings	1	2	3	4	5
3.	my arms and legs feel very heavy	1	2	3	4	5
4.	I have feelings of guilt because of the death of my patient	1	2	3	4	5
5.	I feel lost and helpless	1	2	3	4	5
6.	I have frequent headaches	1	2	3	4	5
7.	I tend to cry easily	1	2	3	4	5
8.	concentrating on things is difficult	1	2	3	4	5
9.	I feel extremely anxious and unsettled	1	2	3	4	5
10.	sometimes I have a strong desire to scream	1	2	3	4	5
11.	life loses its meaning for me	1	2	3	4	5
12.	I do not feel healthy	1	2	3	4	5
13.	I frequently feel sad/depressed	1	2	3	4	5
14.	I feel that I am watching myself go through the motions of living	1	2	3	4	5
15.	life seems empty and barren	1	2	3	4	5
16.	I have frequent mood changes	1	2	3	4	5
17.	small problems seem overwhelming	1	2	3	4	5
18.	I have changes in my appetite	1	2	3	4	5
19.	I seem to lose my energy	1	2	3	4	5
20.	I seem to lose my self-confidence	1	2	3	4	5
21.	I am usually unhappy	1	2	3	4	5
22.	I stay awake most of the night	1	2	3	4	5

Appendix A.4

SAMPLE ITEMS FOR THE MASLACH BURNOUT INVENTORY⁴

"Human Services Survey"

by Christina Maslach and Susan E. Jackson

Directions: The purpose of this survey is to discover how various persons in the human services or helping professions view their jobs and the people with whom they work closely. Because persons in a wide variety of occupations will answer this survey, it uses the term "recipients" to refer to the people for whom you provide your service, care, treatment, or instruction. When you answer this survey please think of these people as recipients of the service you provide, even though you may use another term in your work.

Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, write a "0" (zero) before the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way.

How Often:	0	1	2	3	4	5	6
	Never	A few	Once a	A few	Once a	A few	Every
	day	year or	times a	month	times a	week	times a
		less	or less	month		week	
			less				

I. Depersonalization

5. I feel I treat some recipients as if they were impersonal objects.

II. Personal Accomplishment

9. I feel I'm positively influencing other people's lives through my work.

III. Emotional Exhaustion

20. I feel like I'm at the end of my rope.

⁴ Due to copyright restrictions by the publisher of the MBI (CPP Inc.), the full version of the instrument could not be included in this manuscript. Please see contact the publisher for information on how to obtain the full version.

From the *Maslach Burnout Inventory - Human Services Survey* by Christina Maslach and Susan E. Jackson. Copyright 1988 by CPP, Inc. All rights reserved. Further reproduction is prohibited without the Publisher's consent.

You may change the format of these items to fit your needs, but the wording may not be altered. Please do not present these items to your readers as any kind of "mini-test," but rather as an illustrative sample of items from this instrument. We have provided these items as samples so that we may maintain control over which items appear in published media. This avoids an entire instrument appearing at once or in segments which may be pieced together to form a working instrument, protecting the validity and reliability of the test. Thank you for your cooperation. CPP, Inc., Licensing Department.

Appendix A.5: The Index of Work Satisfaction for Nurses (IWS), Stamps (1997)

The following statements are related to your satisfaction with your current nursing job. Please respond to each item. If it's hard to choose a response, select the number that *comes closest* to your feeling about the statement. Please give your candid opinion and do not go back to change any of your answers.

Scoring Key: Please note that the smaller the number the stronger the agreement

1 = Strongly Agree (SA)

2 = Agree (A)

3 = Somewhat Agree (SWA)

4 = Neutral (N) Please *try to avoid the neutral option*

5 = Somewhat Disagree (SWD)

6 = Disagree (D)

7 = Strongly Disagree (SD)

	Statement	SA	A	SWA	N	SWD	D	SD
1	My present salary is satisfactory	1	2	3	4	5	6	7
2	Nursing is NOT widely recognized as being an important profession	1	2	3	4	5	6	7
3	The nursing personnel on my service pitch in and help one another out when things get in a rush	1	2	3	4	5	6	7
4	There is too much clerical paperwork/computer-work required of nursing personnel in this hospital	1	2	3	4	5	6	7
5	The nursing staff has sufficient control over scheduling their own shifts in my hospital/unit	1	2	3	4	5	6	7
6	Physicians in general cooperate with nursing staff on my unit	1	2	3	4	5	6	7
7	I feel that I am supervised more closely than is necessary	1	2	3	4	5	6	7
8	It is my impression that a lot of nursing personnel at this hospital are dissatisfied with their pay	1	2	3	4	5	6	7
9	Most people appreciate the importance of nursing care to hospital patients	1	2	3	4	5	6	7
10	It is hard for new nurses to feel "at home" in my unit	1	2	3	4	5	6	7
11	There is no doubt in my mind that what I do on my job is really important	1	2	3	4	5	6	7
12	A big gap exists between the administration of my hospital and the daily problems of the nursing service	1	2	3	4	5	6	7
13	I feel I have sufficient input into the plan of care for each of my patients	1	2	3	4	5	6	7
14	Considering what is expected of nursing personnel at this hospital, the pay we get is reasonable	1	2	3	4	5	6	7
15	I think I could do a better job if I did not have so much to do all the time	1	2	3	4	5	6	7
16	There is a good deal of teamwork and cooperation among various levels of nursing staff on my unit	1	2	3	4	5	6	7
17	I have too much responsibility and not enough authority	1	2	3	4	5	6	7
18	There are not enough opportunities for advancement of nursing personnel at this hospital	1	2	3	4	5	6	7
19	There is a lot of teamwork between nurses and doctors on my own unit	1	2	3	4	5	6	7
20	On my unit, my supervisors make all the decisions. I have little direct control over my own work	1	2	3	4	5	6	7

21	The present rate of pay increase for nursing service personnel at this hospital is NOT satisfactory	1	2	3	4	5	6	7
22	I am satisfied with the types of activities that I do on my job	1	2	3	4	5	6	7
23	The nursing personnel on my service are NOT as friendly and outgoing as I would like	1	2	3	4	5	6	7
24	I have plenty of time and opportunity to discuss patient care problems with other nursing service personnel	1	2	3	4	5	6	7
25	There is ample opportunity for nursing staff to participate in the administrative decision-making process	1	2	3	4	5	6	7
26	A great deal of independence is permitted, if not required, of me	1	2	3	4	5	6	7
27	What I do on my job does NOT add up to anything really significant	1	2	3	4	5	6	7
28	There is a lot of "rank consciousness" on my unit: nurses seldom mingle with those with less experience or different types of educational preparation	1	2	3	4	5	6	7
29	I have sufficient time for direct patient care	1	2	3	4	5	6	7
30	I am sometimes frustrated because all of my activities seem programmed for me	1	2	3	4	5	6	7
31	I am sometimes required to do things on my job that are against my better professional nursing judgment	1	2	3	4	5	6	7
32	From what I hear about nursing service personnel at other hospitals, we at this hospital are fairly paid.	1	2	3	4	5	6	7
33	Administrative decisions at this hospital interfere too much with patient care	1	2	3	4	5	6	7
34	It makes me proud to talk to other people about what I do on my job	1	2	3	4	5	6	7
35	I wish the physicians here would show more respect for the skill and knowledge of the nursing staff	1	2	3	4	5	6	7
36	I could deliver much better care if I had more time with each patient	1	2	3	4	5	6	7
37	Physicians at this hospital generally understand and appreciate what nursing staff does	1	2	3	4	5	6	7
38	If I had the decision to make all over again, I would still go into nursing	1	2	3	4	5	6	7
39	The physicians at this hospital look down too much on the nursing staff	1	2	3	4	5	6	7
40	I have all the voice in planning policies and procedures for this hospital and my unit	1	2	3	4	5	6	7
41	My particular job really doesn't require much skill or "know-how"	1	2	3	4	5	6	7
42	The nursing administrators generally consult with the staff on daily problems and procedures	1	2	3	4	5	6	7
43	I have the freedom in my work to make important decisions as I see fit, and can count on my supervisors to back me up	1	2	3	4	5	6	7
44	An upgrading of pay schedules for nursing personnel is needed at this hospital	1	2	3	4	5	6	7

Appendix A.6: University of Minnesota IRB Approval Letter

Jehad Adwan

From: irb@umn.edu
Sent: Thursday, July 09, 2009 11:28 AM
To: adwan001@umn.edu
Subject: 0906E68723 - PI Adwan - IRB - Exempt Study Notification

TO : adwan001@umn.edu,

The IRB: Human Subjects Committee determined that the referenced study is exempt from review under federal guidelines 45 CFR Part 46.101(b) category #2 SURVEYS/INTERVIEWS; STANDARDIZED EDUCATIONAL TESTS; OBSERVATION OF PUBLIC BEHAVIOR.

Study Number: 0906E68723

Principal Investigator: Jehad Adwan

Title(s):
Pediatric Nurses' Grief Experience over the Death of Their Patients: Its Relationship with Burnout and Job Satisfaction _____

This e-mail confirmation is your official University of Minnesota RSPP notification of exemption from full committee review. You will not receive a hard copy or letter. This secure electronic notification between password protected authentications has been deemed by the University of Minnesota to constitute a legal signature.

The study number above is assigned to your research. That number and the title of your study must be used in all communication with the IRB office.

Research that involves observation can be approved under this category without obtaining consent.

SURVEY OR INTERVIEW RESEARCH APPROVED AS EXEMPT UNDER THIS CATEGORY IS LIMITED TO ADULT SUBJECTS.

This exemption is valid for five years from the date of this correspondence and will be filed inactive at that time. You will receive a notification prior to inactivation. If this research will extend beyond five years, you must submit a new application to the IRB before the study's expiration date.

Upon receipt of this email, you may begin your research. If you have questions, please call the IRB office at (612) 626-5654.

You may go to the View Completed section of eResearch Central at <http://eresearch.umn.edu/> to view further details on your study.

The IRB wishes you success with this research.

Appendix A.7: Letter of Approval from the University of Minnesota Medical Center, Fairview Research Administration

Page 1 of 1

Adwan, Jihad

From: Rugani, Michael **Sent:** Tue 10/27/2009 2:33 PM
To: Rock, Jody L; Fellows, Carol M; Bode, Debra W; Hagerman, Ann
Cc: Baranauskas, Adrienne S; Adwan, Jihad
Subject: Pediatric Nurses' Grief Experience - Study Conducted by Jihad Adwan
Attachments:

All,

After having discussed the matter with the interested parties, it has been agreed that Jihad Adwan will conduct his study using the following procedures for recruitment and compensation:

- Nurse Managers will make a verbal announcement regarding the study, the availability of the survey instrument, and that an e-mail communication will also follow at a regularly scheduled staff meeting.
- Jihad Adwan will be responsible for sending the e-mail using the approved invitation form.
- Jihad Adwan will be allowed to post one approved flyer announcing the study in each conference room, and one in each staff restroom (or to have someone post them in the restrooms for him). No flyers are to be posted in public restrooms.
- Jihad Adwan will be allowed to use an area in each conference room for the distribution and collection of hard copies of the survey instrument. He will be responsible for maintaining an adequate stock of blank surveys, as well as timely collection of completed surveys.
- Jihad Adwan agrees to be solely responsible for the distribution of compensation that the participants are entitled to.

Please feel free to contact me directly with any questions or concerns related to this communication.

Thank you,

Mike Rugani, Research Regulatory Affairs Officer

Fairview Health Services
Research Administration
2200 Riverside Avenue * Minneapolis, MN 55454
Phone 612-672-7680 * Fax 612-672-7691
E-mail: mrugani1@fairview.org

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Jun 11, 2010

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Volume Number	14
Issue Number	4
Type of Use	Dissertation/Thesis
Requestor type	Individual
Title of your thesis / dissertation	Pediatric Nurses' Grief Experience: Its Relationship with Burnout and Job Satisfaction
Expected completion date	Jul 2010
Estimated size(pages)	130
Billing Type	Invoice
Billing Address	5-140 WDH 308 Harvard St. SE Minneapolis, MN 55455 United States
Customer reference info	
Total	0.00 USD
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Appendix A.9: Permission to Use the Maslach Burnout Inventory (MBI)

Aug 26 09 06:41a

p.4



Permission 18184

Maslach Burnout Inventory ("MBI") Research Permission Request Form and Agreement

(Please type or print clearly and complete form thoroughly)

Date: 8/24/2009

Name: Jihad Adwan

Address: 11749 Arnold Palmer Trl NE

City: Blaine State: MN Zip Code: 55449 Country: USA

Telephone Number: 763-754-2076 Fax Number: 612-626-6606

Email Address: adwan001@umn.edu

CPP Customer Number:

If you do not currently have a CPP customer number, please complete an Eligibility Form including your research advisor's signature (if you are a student) and return it to CPP along with this form.

MBI Edition you will work with: (check one) Human Services Survey Educators Survey General Survey

Project Type: (check one) Dissertation Thesis Research Project Other

Project Title: Pediatric Nurses' Grief Experience over the Death of Their Patients: Its Relationship with Burnout and Job Satisfaction

Expected Project Begin Date: 9/15/09 **Expected Project End Date:** 5/1/2010

Total quantity of MBI surveys you expect to administer for your research: 200

Describe in detail your proposed and expected use of the MBI: The MBI will be used to measure pediatric nurses' burnout scores. The goal of the project is to find relationships between nurses' grief and their burnout and job satisfaction levels.

Describe in detail how you will modify, adapt, translate, or include in a larger battery, etc. the MBI: No modifications will be done to the tool's items. The only slight change I propose is changing the word "client" into patient.

Describe in detail how you plan/expect to deliver (administer) the MBI to research participants: The MBI will be administered as a paper-and-pencil and online instrument to participants.

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6. You agree to send your data to CPP's Research Division in SPSS format to research@cpp.com with a copy to the Permissions Coordinator at perms@cpp.com within 30 days of completion of your project.
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11. This agreement shall not be valid until both parties have fully executed the agreement.

I hereby request permission from CPP for research use of the MBI as described above and agree to the terms outlined above for such research use:

Deborah Adron _____ Date 8/26/09 _____
 Signature Date

For CPP, Inc. Use Only

CPP Permission Number 18184

CPP, Inc., hereby extends you permission under the terms stated above for the adaptation you have described above.

- The associated permission fee will be \$ 120.00 and is due within 30 days of CPP's signature date noted below.
- The credit line you will need to use with the MBI is as follows:

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Cathy DeBalco, VP Marketing _____
 CPP Authorized Signature 8/21/09

Appendix A.10: Permission to use the Index of Work Satisfaction for Nurses (IWS)

Market Street Research, Inc.

31 Trumbull Rd
 Northampton, MA 01060
 (413) 584-0465

Invoice

DATE	INVOICE N...
9/15/09	3539

BILL TO
Jehad Adwan University of MN, School of Nursing 5-140 WDH, 308 Harvard St SE Minneapolis, MN 55455

PAID

TERMS	DUE DATE
On receipt	9/15/09

DESCRIPTION	AMOUNT
IWS Questionnaire	30.00
This invoice is permission to use the Index of Work Satisfaction Questionnaire.	
Total	\$30.00

Appendix A.11: Permission to use the Revised Grief Experience Inventory (RGEI)

Jehad Adwan

From: eliselev@andromeda.rutgers.edu
Sent: Friday, June 11, 2010 9:41 AM
To: Jehad Adwan
Subject: Re: RGEI permission

Dear Dr. Adwan-

Congratulations on the successful defense of your dissertation. I will appreciate receiving an abstract of your completed study.

You have my permission to use the RGEI in your research.

Elise L. Lev, Ed.D., RN
Associate Professor
Rutgers, The State University of New Jersey 180 University Ave.
Newark, NJ 07102
phone: Newark, NJ (973) 353-3832
phone: Stamford, CT (203) 322-9905
fax: (203) 322-6274

> Dear Elise,
>
> Per our conversation a few minutes ago, I would really appreciate your
> help in getting the proper permission to for using the RGEI to include
> in my dissertation appendices. As I mentioned, an electronic
> communication is sufficient.
>
>
>
> My contact information:
>
> Jehad Adwan
>
> 4-150 Weaver Densford Hall,
>
> 308 Harvard St. SE, Minneapolis, MN 55455
>
> E-mail: adwan001@umn.edu
>
> Phone: 612-625-0430
>
>
>
> Thank you so much!
>
> -Jehad
>
>

Elise L. Lev, Ed.D., RN
Associate Professor

Appendix B: Details of study results: Demographic characteristics

Table B.1: Demographic Descriptions of the participants (nominal variables)

Descriptor	Sub-descriptor	Count	%
Gender	Female	114	95
	Male	6	5
Ethnicity	White	117	98
	Other	3	2
Marital Status	Married	69	58
	Single	47	39
	Separated/divorced	4	3
Have Children	Yes	50	42
	No	70	58
Living with	Alone	25	21
	Spouse/SO, No children	31	26
	Spouse/SO, w/ children	42	35
	w/ children	4	3
	Other	18	15
Education	Associate	22	18
	Bachelor's	91	76
	Master's	7	6
	Specialized	12	10
Unit Type	Pulmonary, Cardiology, Renal	16	13
	Heme/Onc., GI, Trauma	29	24
	PICU	30	25
	BMT	33	28
	FP	11	9
	Other	1	0.8

Table B.2: Demographic and work-related descriptors (continuous variables).

Descriptor	Range	M	SD
Age	23-62 yrs.	34	10
Years of nursing experience	1-40	9	9
Years of pediatric experience	1-36	6.7	6.9
Number of Children	0-4	0.89	1.15
Number of negative life events	0-4	0.74	0.98
Number of patients' death in past 12 months	0-40	13	9
Longest time known patient before they died	0-20 yrs.	2.6 yrs.	3.4
Shortest time known patient before they died	0-2 yrs	1.6 yrs	3.5
Youngest patient died	0-18 yrs	1.5 yrs.	3 yrs.
Oldest patient died* ⁵	1.5-93 yrs	22.3 yrs	12.3
Time elapsed since last patient death	0-4 yrs.	0.5 yrs.	0.63

⁵ * Some nurses reported the age of the oldest patient who died under their care in any setting, which includes adults as well. I am wondering if the reference to the adult patients should be excluded or should it be left alone.

Appendix C: Frequency distributions RGEI scores.

Figure C1:
Frequency distributions of RGEI total scores.
(Items 1-22)

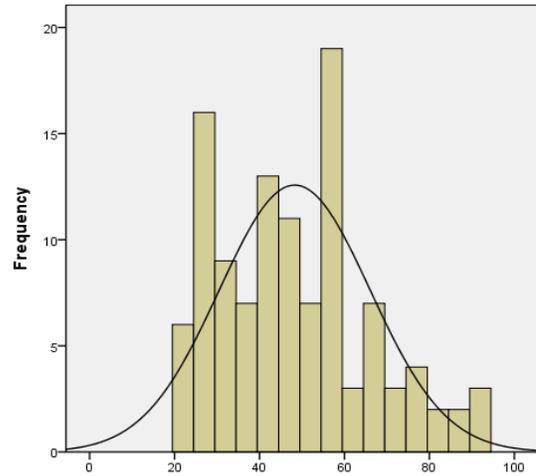


Figure C2: Frequencies of RGEI's
Existential Tension subscale
(items: 5, 11, 14, 15, 20, 21)

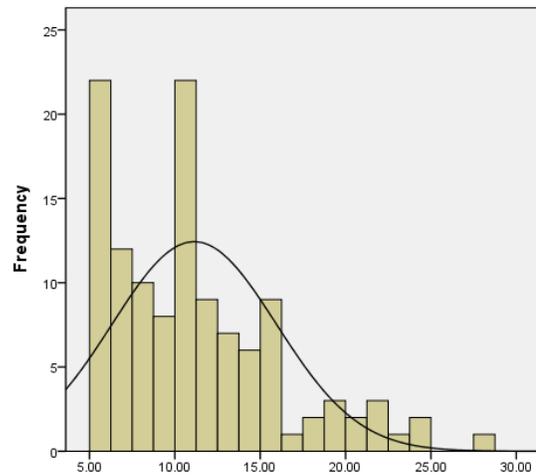


Figure C3:
Frequency Distribution of RGEI
Depression subscale Scores
(Items 7, 8, 9 13, 16, 17)

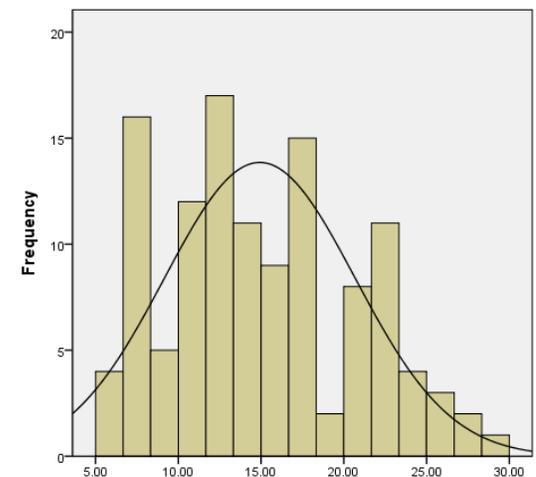


Figure C4:
Frequency Distribution of RGEI Guilt
subscale Scores.
(Items 1, 2, 4)

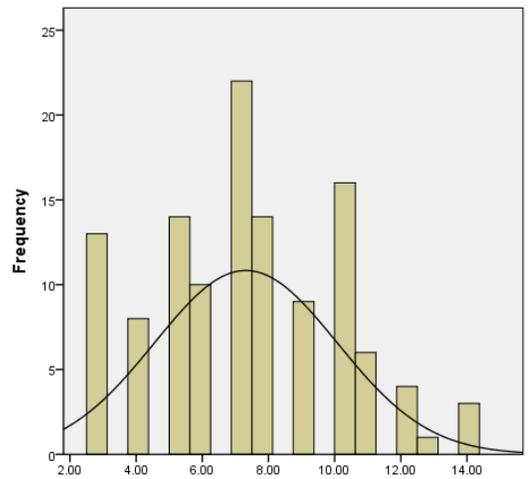
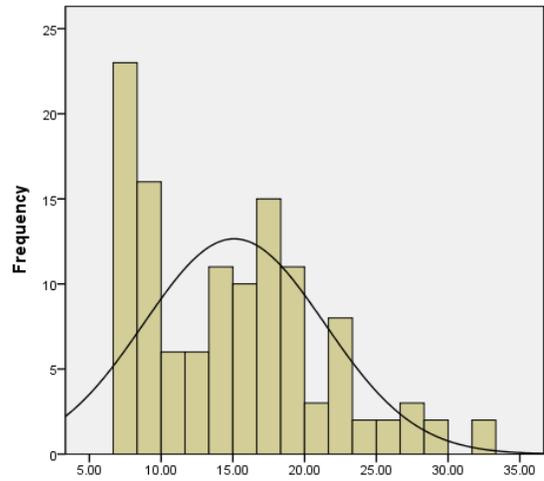


Figure C5:
Frequency Distribution of RGEI Physical
Distress subscale Scores.
(Items 3, 6, 10, 12, 18, 19, 22)



Appendix D: Frequency distributions of Burnout subscales

Figure D1:
Frequency distribution of Personal
Accomplishment subscale score.
(Items 4, 7, 9, 12, 17, 18, 19, 21)

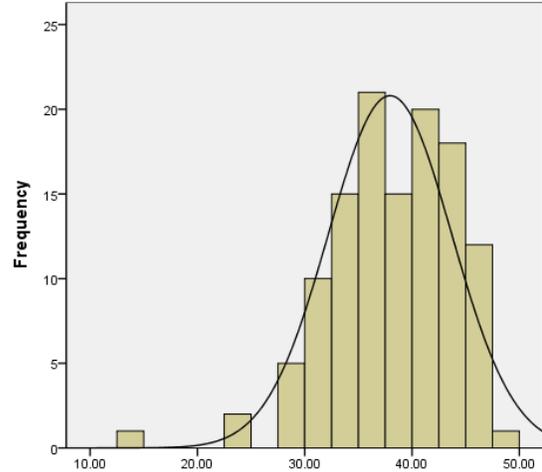


Figure D2:
Frequency distribution of Emotional
Exhaustion subscale score.
(Items 1, 2, 3, 6, 8, 6, 8, 13, 14, 16, 20)

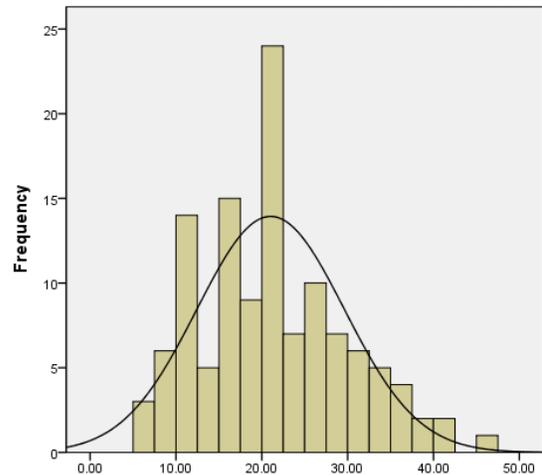
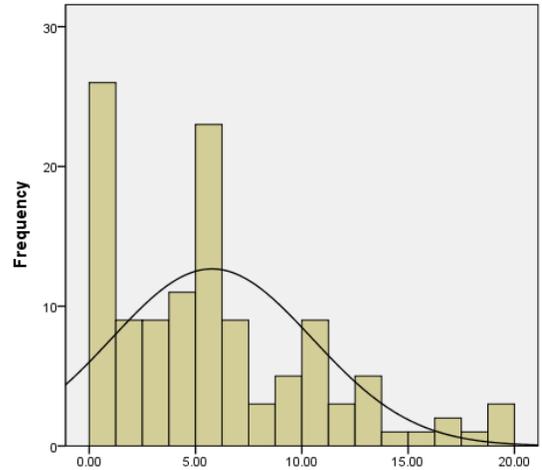


Figure D3:
Frequency distribution of
Depersonalization subscale score.
(Items 5, 10, 11, 15, 22)



Appendix E: Frequency distributions of Job Satisfaction total and subscale scores

Figure E1:
Frequency distribution of IWS total score
(Items 1 through 44)

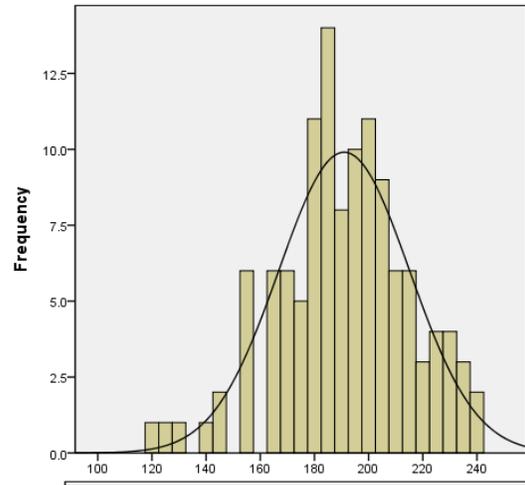


Figure E2:
Frequency distribution of IWS Pay
subscale score.
(Items 1, 8, 14, 21, 32, 44)

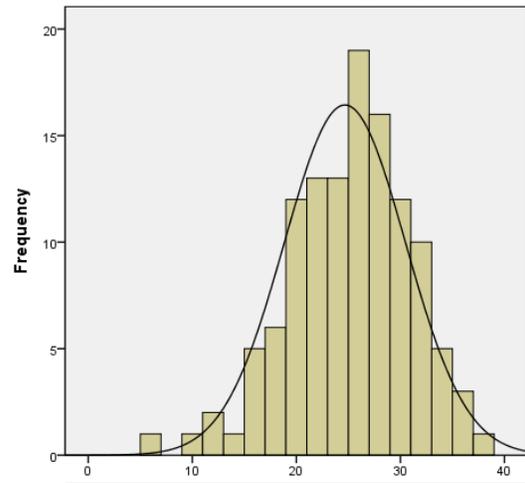


Figure E3:
Frequency distribution of IWS Autonomy
subscale score.
(Items 7, 13, 17, 20, 26, 30, 31, 43)

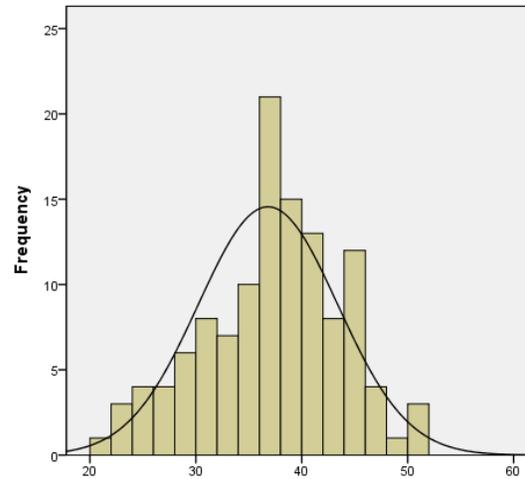


Figure E4:
 Frequency distribution of IWS Task Requirement subscale score.
 (Items 4, 15, 22, 24, 29, 36)

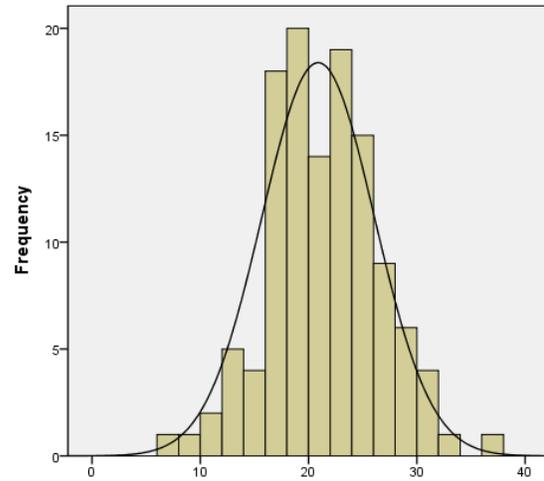


Figure E5:
 Frequency distribution of IWS Organizational Policy subscale score.
 (Items 5, 12, 18, 25, 33, 40, 42)

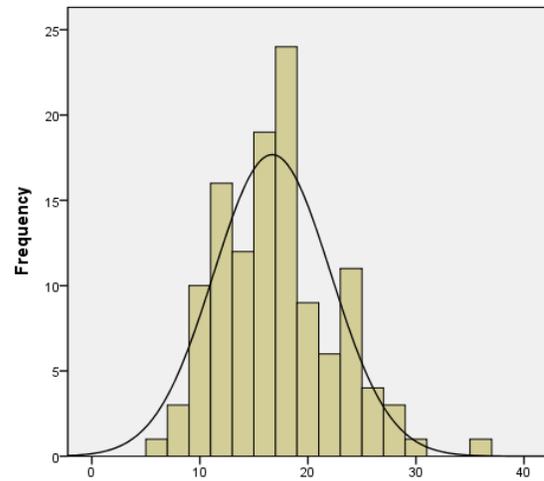


Figure E6:
 Frequency distribution of IWS Professional Status subscale score.
 (Items 2, 9, 11, 27, 34, 38, 41)

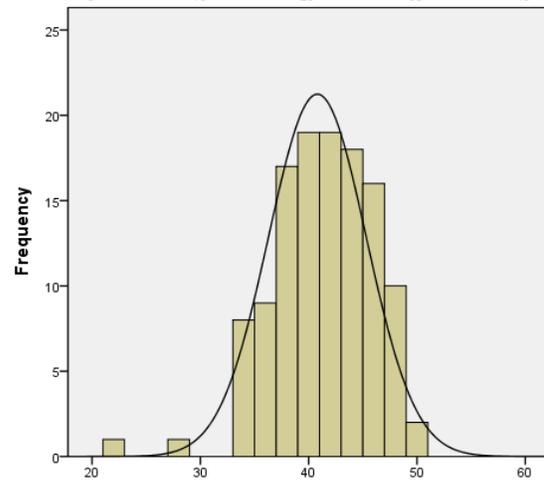


Figure E7:
Frequency distribution of IWS
Professional Interaction subscale score.
(Items 3, 6, 10, 16, 19, 23, 28, 35, 37 39)

