

Pediatric Nurse Burnout in  
Intensive Care and  
non-Intensive Care Settings

by

Tonya Drayden, R. N. , B. S. N.

A Thesis

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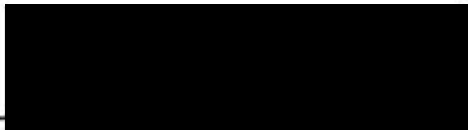
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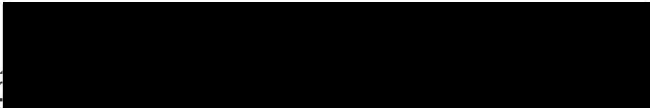
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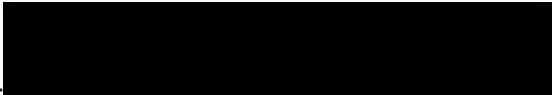
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Pam Bellings, Ph.D., Associate Professor, Thesis  
Advisor



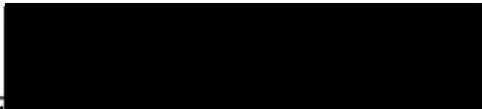
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Marsha Helms, M.S., Associate Professor, First Reader



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Marie Scott Brown, Ph.D., Professor, Second Reader



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Carol A. Lindeman, R.N., Ph.D., Dean, School of Nursing

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## CHAPTER I

## INTRODUCTION

There have been numerous articles written on the subject of burnout in the past ten years (Chernise, 1980; Edelwich & Brodsky, 1980; Maslach, 1982; and Pines, Aronson, & Kafry, 1981). Research has looked at burnout in police officers, lawyers, and health care professionals in a variety of health care settings.

Job stress and burnout have been documented in nursing research as being associated with, if not the cause of, job turnover, increased absenteeism, decreased productivity, and decreased job satisfaction (Lester & Brower, 1981; Lobb & Reid, 1987; and Harris, 1989). High job stress levels and burnout have also been associated with physiological symptoms of fatigue, headache, sleep disturbance, and the exacerbation of medical conditions (Lobb & Reid, 1987).

In the wake of current nursing shortages and decreasing nursing school enrollments, it seems evident that methods to insure nurse survival would be an important focus for the maintenance of adequate hospital staffing and quality of nursing care.

Nursing research has investigated burnout in generalized adult nursing care settings. However,

there has been limited research exploring stress and burnout in areas of pediatric nursing.

Components of nursing care, such as providing physical care and problem solving in the area of psychosocial needs, may contribute to the development of stress and potentially burnout. Intensive care nursing has been identified as an area of high stress, because of the high level of client instability, and the constant need for supervision. In the pediatric area, another specialized area, the phenomena of stress and burnout have been investigated on a limited scale.

The purpose of this study is to compare the phenomena of burnout of registered nurses in pediatric intensive care and non-intensive care settings. A review the literature will be presented, followed by a conceptual framework and methods.

#### Literature Review

The concepts of stress and burnout have been repeatedly used and abused in the lay literature. Definitions are presented here to clarify these concepts and to aid in the development of a conceptual framework for this study.

### Stress

The concept of stress was introduced by Hans Selye as early as 1956. Selye defined stress as a non-specific response of the body to any demand made upon it. In response to this demand, there is a need to perform an adaptive function and thereby return to the original pre-stressed state.

It is irrelevant whether the agent or situation is perceived as pleasant or unpleasant. It is the intensity of the stimulus that determines the demand for readjustment or adaptation (Vachon & Pakes, 1985).

Internal and external factors govern the response to stress. External factors, such as social support and environmental stimuli, may positively or negatively contribute to the stress response. Internal characteristics, such as personality factors, may do the same. Each contributes to the process of adaptation.

Adaptation is a dynamic process between individuals and their environment. The adaptation process is considered effective if it promotes physiologic, psychologic, and social integrity of the individual (Pollock, 1989).

The level of adaptation is related to the effectiveness of the adaptive behavior. This is determined by the type and severity of the situational stimuli and the extent to which the existing internal and external factors are able to mediate the effect to the individual (Pollock, 1989).

Stress precedes the development of burnout. When a person experiences chronic stress, with an inadequate adaptation phase, the person can eventually reach the stage of exhaustion. Ultimately, physical, emotional and mental exhaustion results in burnout (Maslach, 1982).

### Burnout

Burnout has been defined as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do "people work" (Maslach, 1982). Burnout is defined as physical, emotional and mental exhaustion (Stout & Williams, 1983). According to Chernise (1980), burnout is not the same as temporary fatigue or strain. It is a term that describes the process by which a person becomes disengaged from work as a response to perceived stress and strain in the work place. Burnout is associated, but not equated,

with stress and the inability to accommodate to the perceived stress.

### Job Related Burnout

Burnout can develop in response to stress and the perceived feelings of overload caused by the job activities. It develops in the process of adapting to these stressors.

Chernise (1980) describes burnout as being part of a transactional process. In this transactional model, burnout is viewed as a process consisting of job stress, worker strain, and psychological accommodation (see Figure 1).

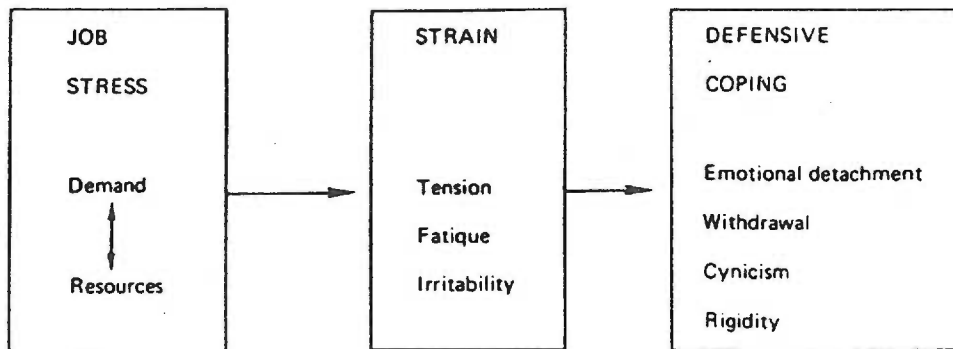


Figure 1. Transactional Analysis of Stress and Coping  
(Chernise, 1980).

In the first stage, there is an imbalance between resources and demand. The professional helper is

inundated by requests from recipients. Efforts are made to fulfill their demands with limited resources. Subjective feelings of stress result.

In the second stage, there is an immediate short-term emotional response to this imbalance. The response is characterized by feelings of anxiety, tension, fatigue, and exhaustion. For some, there are subjective feelings of strain.

The third, final stage consists of changes in attitude and behavior. There may be a tendency to treat clients in a detached and mechanical manner, or become cynical and preoccupied with one's own gratification. As a defense this can result from attempts to cope by the professional helper.

For example, loss of concern for the client reduces the helper's awareness of responsibility. The helper is then less vulnerable to failure that might occur in helping the client. The development of a detached relationship with clients serves as a defense mechanism that limits the amount of stress that may develop (Chernise, 1980). This analysis is consistent with Maslach's (1982) definition of burnout.

There are different demands required in the performance of a job. Job characteristics may either

promote or reduce emotional stress. In nursing, the process of providing care to clients who present in a variety of illness states may be one characteristic which promotes stress.

Nurses working in intensive care units are exposed to environmental stressors such as the use of multiple monitors with auditory sensors (Topf & Dillon, 1988). Critically ill clients also provide stressors in association with the need for frequent physical assessments and the performance of multiple medical treatments. Providing nursing care in an environment of stress may be another characteristic. Any one characteristic can be an important factor in the development of burnout (Maslach, 1982).

Job settings that are prone to burnout often have a component of 'overload' in common (Maslach, 1982). As the emotional and physical expenditure increases, the burden exceeds the person's threshold of tolerance, resulting in stress. In job settings such as nursing, there is a potential for burnout. In the nursing profession, the nurse assesses and provides for the recipient what he or she needs. Such assistance takes a large amount of physical and/or emotional energy.



For the professional helper, this feeling of stress is translated into the subjective feelings of "too many people, and too little time to adequately serve their needs," e.g. feelings of overload. This is a situation that can potentiate the development of burnout (Maslach, 1982).

#### Stress and Burnout in Nursing

Harris (1989) provides a literature review of nursing research on nurse stress and coping. In the review, she presents a causal model for stress which is suggested by nursing literature.

This model (see Figure 2) shows that in the process of the development of stress, feelings of anxiety, as well as feelings of alienation, develop. As a result burnout develops, which in turn increases the level of stress. Suggested mediating factors are individual characteristics such as age, marital status, work experience, education, and the ability to anticipate problems.

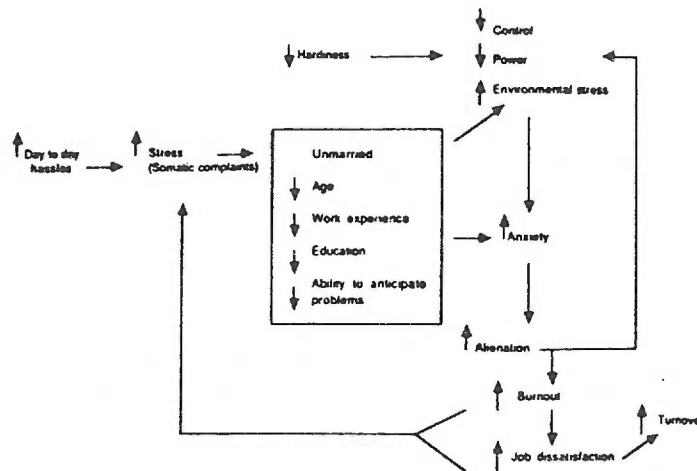


Figure 2. Paradigm analysis of stress-coping effects in nurses (Harris, 1989).

The following nursing research reflects studies investigating the relationship of stress and nursing care. Coffey, Skipper, and Jung (1988) studied the relationship of nurses and shift work on the variables of job related stress and job performance. Each nurse assessed his or her job performance and stress. The tools they used were the Six-Dimension Scale of Nursing Performance developed by Schwirian and a scale developed by Swiercz. They found that the shift worked correlated strongly with the nurse's perceived job-related stress and job performance. Job performance was highest for nurses working on the day shift. The job performance declined when working on nights, progressing lower for afternoon and rotating shifts. In addition, these nurses experienced the most job-related stress while working rotating shifts (switching

back and forth between all three shifts), followed by afternoon, day, and night shifts.

They also found that the higher the nurses' perception of their job performance, the more likely the nurses expected to remain at their place of employment. It is presumed that this might also indicate some level of job satisfaction.

The nurses also experienced higher levels of job stress the longer the time they had spent on their particular shift. Increased job stress was also correlated with higher positions in the nursing hierarchy.

Coffey et al. (1988) found no significant relationship between sociodemographic background characteristics and stress. The characteristics studied were age, race, sex, education, income, marital status, length of time as registered nurse, and the number of young children in the home. Though a large (n=463) subject population was used from five different hospitals, it was not clear from the data whether these nurses were from an even cross-section of nursing positions and nursing units, e.g. staff vs. management, ICU vs. non-ICU, adult vs. pediatric, and medical/surgical vs. psychiatric nursing.

Jenkins and Osteheg (1986) studied the syndrome of burnout for oncology nurses. The purpose of their study was to evaluate the levels of burnout in a specialized group of oncology nurses, to discover variables that may be related to its occurrence, and to compare their findings to other groups of nurses. They chose a randomized sample of 152 members of the Oncology Nursing Society. Two self administered tools were used to determine the relationship between the development of burnout and individual factors that may contribute to the increase or decrease of perceived stress.

The study found that this sample of nurses were not experiencing any greater amount of burnout than nurses from other areas of hospital-based care. The mean score for the nurses in the study was 51.7, which compared favorably with a mean burnout score of 52.7 for a generic group of oncology nurses. This calculated value was also lower than the scores reported for emergency room nurses (62.6) and the ratings by a heterogeneous grouping of nurses (57.5). The variables reporting the highest correlation with high burnout scores were those associated with the nurse's perceived availability of psychological

support, amount of job stress, level of job satisfaction, presence of positive or negative feelings about work, and the presence of specific stressors, such as organizational problems. The personal resources variables such as age, and years of experience, were mildly correlated with increased burnout scores.

This study by Jenkins & Osteheg (1986) identified variables instrumental to burnout and identified additional areas of inquiry. Variables identified for further research included data concerning hospital size, the availability of in hospital support, the number of exposures to death, and the number of patients receiving care. Variables not identified by the authors were the differences between the burnout rating from shift to shift, and marital status. These variables could also be instrumental in the dynamics of burnout and its development.

#### Nurse Stress in Intensive Care Units

Historically, intensive care units have been identified as a source of many stressors. Intensive care units (ICUs) are highly charged with activity. They are a specialized area for the treatment of critically ill patients. These patients are often in

need of constant medical and nursing supervision, resulting in the need for interventions that are emergent life-saving measures. Intensive care settings can therefore produce situations producing high exposure to stress from seriously ill patients, anxious families, repetitive contact with death and dying, and the lack of gratification from obtunded patients (Maloney, 1982).

Keane, Ducette and Adler (1985) believe that it is the condition of powerlessness within the environment which is instrumental in the development of stress and burnout. Powerlessness is associated with the inability to control their environment. Environments where nurses can not control events, events with negative consequences, and an inability to make plans, may increase the feelings of powerlessness.

Intensive care units (ICUs) are notorious for events requiring rapid change. ICUs often are places where unanticipated physician interference, lack of supervisory support, sudden patient death or relapse, and unpredictable scheduling occur. These factors can result in heightened feelings of powerlessness, and potentiate burnout (Keane, 1985).

### Stress and Burnout in Intensive Care Units

Topf and Dillon (1988) investigated the development of burnout in critical care nurses in response to noise-induced stress. They first of all, assessed the degree and the sources of noise-induced stress in critical care nurses, who had had long-term exposure to unpredictable noise. Then they evaluated whether noise-induced stress could be linked to burnout in this population. The tools they used were the Jones's Staff Burnout Scale for Health Professionals, and the Maslach Burnout Inventory.

Their research demonstrated that nurses with an intrinsic sensitivity to noise were no more at risk for burnout when it was linked with noise-induced stress than were less sensitive nurses. However, using a multiple regression technique, it was found that burnout was linked with life stressors and other occupational stressors, such as interpersonal conflicts and work load.

### Burnout in Pediatric Nursing

Maslach (1982) identifies people in the helping professions as being targets for experiencing occupational stress and for the potential of burnout. Just as the helper's role can assist in the

transactional process, the special characteristics of the recipient can also contribute to this process.

Pediatric nursing involves the action of providing nursing care to children. The recipients of such care are characterized as being younger than the helper, having a decreased ability to communicate their needs, and usually having a decreased ability to provide self care. Pediatric nurses are also involved in providing support and guidance to family members who are learning to manage their child's care. Unlike adult nursing, nursing duties in pediatrics seldom decrease when the family members are present, nor do they lessen during the night time hours.

The increasing trend of complicated social problems, e.g. decreasing social supports and increased incidence of child abuse/neglect (Campbell & Humphreys, 1984), also adds challenges for the pediatric nurse. Often these problems may contribute to the stress of providing nursing care and the potential for development of burnout.

Limited studies documenting burnout in pediatric nursing are available. Pagel and Wittmann (1986) studied the relationship between personal and job-related variables and burnout for pediatric nurses in



an acute care setting. They used the Tedium Measure (Pines & Kafry, 1978) to measure the level of burnout. The personal variables studied were marital status, level of education, age, and family responsibilities. The job-related variables were employment status, shift assignments, patient care overload, years in their position, years of nursing experience, and amount of overtime worked.

Pagel and Wittmann (1986) found that the mean score of 3.58 indicated the presence of burnout in this pediatric nurse population. They also found that of all the variables, the variable "percentage of children on the unit with social or behavioral problems," correlated significantly with burnout.

It is unclear why the other personal and job-related variables did not correlate significantly with burnout. It is surprising that there was a lack of a significant correlation between burnout and the two variables of 1) percentage of children with fatal illnesses, and 2) children with critical illnesses. Although this finding was unexpected, it is Pagel and Wittmann's (1986) belief that nurses may anticipate providing care to dying or critically ill children, and in the anticipation of such cases, there is a lessening

in the emotional toll and some gain in level of satisfaction.

However, the nursing care of critically ill or dying children requires an advanced level of nursing skill, in addition to psychiatric and social supports in the process of caring for the child and the family. It is hard to believe that this population of nurses experienced low levels of burnout in these special circumstances, unless their contact with critically ill or dying children was severely limited.

It is also possible that the tool used was inadequate for measuring burnout in this instance. Stout and Williams (1983) compared the Tedium Measure to the Maslach Burnout Inventory (MBI) and found that both tools correlated significantly with job satisfaction and health problems. This was consistent with the definitional constructs of these tools. However, they suggested that the MBI might be more useful in studying the patterns of burnout.

The Maslach Burnout Inventory measures burnout as a continuous variable. The scoring ranges from low to high depending on the magnitude of the scores concerning emotional exhaustion, depersonalization, and personal accomplishment. The Tedium Measure is

considered identical in the definition of burnout and symptomatology as the MBI. It also defines burnout as a continuous variable. However, the Tedium scale provides only a single score, while there are three subscales in the MBI. The Tedium Measure may therefore be less sensitive in measuring patterns of burnout than the Maslach Burnout Inventory.

Lewiston, Conley, and Blessing-Moore (1981) also studied the presence of burnout in cystic fibrosis caregivers. The purpose of the study was to measure the hypothetical presence of burnout in health care providers in a special area of expertise. They believed that health care providers who work with clients with fatal, progressive diseases, such as cystic fibrosis, would have increased levels of burnout. Once identified, techniques to decrease burnout would be beneficial in promoting professional survival.

The Maslach Burnout Inventory was administered to a health care population made up of physicians (10%), nurses (40%), social workers (40%), and other health professionals (10%). They were divided into two groups, with the first group (n=47) representing caregivers who spent at least half of their

professional time working with cystic fibrosis (CF). This group was designated the high CF (Hi CF) exposed caregivers. The second group (n=49) was made up of health care providers who spent 20 percent or less of their time working with cystic fibrosis. This group was designated the low CF (Lo CF) exposed caregivers. The non-CF time was spent in areas of oncology, renal, neurology, congenital defects, and general pediatrics. There was no caregiver involvement in the areas of intensive care, neonatology, or mental illness.

They found that the scores for emotional exhaustion (EE) were significantly higher for the Hi CF group than the Lo CF group. The scores for depersonalization were however lower for the Hi CF group than the Lo CF group. They found that the scores for personal accomplishment (PA) were identical for both groups.

Lewiston et al. (1981) further analyzed the data by subdividing the Hi CF group into two groups. The first group was made up of those with burnout scores greater than the mean for the entire group. The second group was made of those with burnout scores less than the mean. These two new groups were analyzed in terms of demographic factors: age, number of years on the job,

the percentage of time spent with sick hospitalized clients, gender, and professional discipline.

The results of this second analysis were that those caregivers who spent a higher percentage of time with sick hospitalized patients had a significantly higher burnout score. This group was made up of physical and respiratory therapists and registered nurses. The people in other professional disciplines, as well as the other demographic factors, did not show any significant difference (Lewiston, Conley, & Blessing-Moore, 1981).

Their results closely follow Maslach's theory, that those individuals involved in "people work" are at a high risk of developing burnout. The first component was the development of emotional exhaustion. This high risk population of CF caregivers did demonstrate a higher emotional exhaustion score when they spent a larger percentage of time with clients with cystic fibrosis. However, the lower scores for depersonalization in the Hi CF group was not consistent with Maslach's theory. It is also not clear why there was no significant difference in the personal accomplishment scores between the Hi and Lo CF groups.

The authors spent very little time explaining this inconsistency.

It is possible that the population was mixed with a combination of caregivers who had a variety of time of direct patient exposure. The authors did not attempt to differentiate the kind of patient to caregiver contact. This inconsistency in the respondent's profession may contribute to the inconsistency in the score results.

#### Stress, Pediatrics and ICU Nursing

There have been no studies investigating the variables of burnout in pediatric ICU nursing. However, nursing stress in pediatric ICUs has been studied. Lester and Brower (1981) studied the variables of stress and job satisfaction in a population of pediatric intensive care nurses. They administered the Job Description Index and a symptom checklist. The authors also developed and administered a questionnaire that would assess whether these nurses had Type A personality traits (Lester & Brower, 1981) that could be associated with high stress and the risk of heart attacks. The pediatric nurses were found to be dissatisfied with their pay, their supervisors, their jobs, and promotions. The most common symptoms

of stress checked by the nurses were fatigue, over eating, worrisome thoughts, irritability, and angry feelings. Physical symptoms of stress were seldom checked by the subjects.

The physical symptoms tool was not included within the body of the article. It is therefore unclear how the commonly reported symptoms were different from the physical symptoms list. It is possible that this tool was inappropriate for the measurement of stress in this population, because the subjects did not select these items.

Previous research has documented relationships between stress in intensive care and non-intensive client care settings (Harris, 1989). Authors have been less consistent in measuring levels of burnout between ICU and non-ICU nursing care settings. It is inferred that components of professional nursing practice may contribute to the development of stress and the eventual feelings of burnout (Firth, et al. 1986; Kelly, & Cross, 1985; Lewiston, et al., 1981; Lobb & Reid, 1987; McCranie, et al., 1987).

According to Maslach, burnout can develop in the process of doing 'people work.' It is unclear whether such work is different in terms of the level of

experienced stress and the development of burnout for pediatric nurses in ICU or non-ICU settings.

#### Summary

In the case of the ICU population, ICU nurses may experience more emotional exhaustion in association with the higher acuity client load, and the increased exposure to critically ill and dying clients. The non-ICU nurses might experience an increased level of depersonalization because of their higher number of clients or the potential of inadequate staffing. Non-ICU nurses may also experience a decreased level of personal accomplishment because of the decreased level of autonomy in their client care role.

This suggests that there should be a difference between these two populations. The ICU group could have higher levels of burnout because of the critically ill clients and high stress levels of caregiving. In contrast, the non-ICU nurses could score higher in burnout because of increased multiple client contact and, possibly, decreased feelings of autonomy between staff nurses and the physicians.

Previous studies have attempted to suggest causal relationships of burnout and stress with other concepts such as coping, support systems, and individual



characteristics, such as sex, race, marital status, and hardiness (Browner, 1987; Munn & Tichy, 1987; and Pollock, 1989). This research has been more consistent in investigating stress, but less extensive in the investigation of burnout. This study plans to provide descriptive data which will aid in building the framework for the concept of burnout.

The research previously reviewed has looked at a variety of aspects concerning stress and burnout. However, the research has been primarily qualitative in nature or has used tools that have minimal history of standardization, reliability or validity. They have often maintained a focus of nurses caring primarily for adult populations. There has been no research comparing the levels of burnout of pediatric nurses in ICU and nonICU settings.

#### Conceptual Framework .

This study proposes to determine the perceived levels of burnout of nurses in ICU versus non-ICU pediatric settings. The conceptual framework developed for this study involves the concept of burnout. In this section this concept is discussed as it applies to this study.

The concept of burnout adopted for this study is in accordance with Maslach's (1982) definition. According to Maslach, burnout is defined as a syndrome of emotional exhaustion (EE), depersonalization (DP), and reduced personal accomplishment (PA) which may occur among individuals who do "people work" (Maslach, 1982).

Burnout is conceptualized as a continuous variable, ranging from low to moderate to high degrees of feelings of stress. It does not have a dichotomous value, which would imply that it would either be present or absent (Maslach, 1982). Figure 3 provides a visual depiction of this concept.

Pediatric nurses provide nursing care to children and their families. In the process of providing the physical aspects of nursing care, nurses are involved in building relationships with their clients, making decisions concerning their physical and psychosocial needs, and assisting in the orchestration of care within the health care team.

Nursing is a helping profession. The stresses associated with providing nursing care to children and their families are inherent within the profession of nursing. This health profession is therefore

consistent with Maslach's definition of people who do 'people work' (Maslach, 1982).



Figure 3. Concept of Burnout (Maslach, 1982).

#### Research Questions

The purpose of the study is to compare the level of burnout of nurses in ICU versus non-ICU settings.

The research questions are as follows:

1. What is the perceived level of burnout of pediatric nurses in ICU and non-ICU settings?
2. Are there demographic characteristics which are related to the perceived level of burnout?

## CHAPTER II

### METHODS

This research follows a descriptive correlational design format. This design was chosen for the purpose of exploring the topic of burnout. This study investigated the phenomena of burnout in pediatric nurses working in intensive care and non-intensive client care settings. The data provided a basis for comparing the level of burnout between these two groups.

Pediatric nurses from intensive care and non-intensive care units completed questionnaires which provided demographic information and their perceived level of burnout. The variables of interest are therefore, pediatric nurses and their perceived level of burnout, whether working in ICU or non-ICU patient care settings.

#### Setting

An urban teaching hospital in the Pacific Northwest is the setting for this study. Nurses from five pediatric settings; three intensive care units (ICUs) and two non-intensive care units (non-ICUs), participated. The neonatal intensive care unit (NICU),

intermediate nursery care (INC), and the pediatric intensive care unit (PICU) were designated as pediatric ICU care settings. The two pediatric medical-surgical units (13A and 14A) were designated as pediatric non-intensive care settings. The subjects were a volunteer sample. Therefore, they were self-selected and non-random in distribution. The following text describes individual differences in each of the participating units.

The neonatal intensive care unit (NICU) is a 16-bed unit. Staff provide nursing care to unstable neonates. Nurse-patient ratios are usually 1:1 or 1:2.

The intermediate neonatal care unit (INC) is a 16-bed unit that provides immediate support to unstable neonates following delivery, transport of critically unstable neonates to NICU, and step-down care for stable neonates from NICU. Their nurse to patient ratio ranges from 1:1 to 1:4.

The pediatric intensive care unit (PICU) provides emergent care to pediatric patients. The patient ages may range from newborns to adolescents. There is occasional adult care provided when there is overflow from adult intensive care units. Their bed capacity is 6 to 8 beds. Their nurse to patient ratio is 1:1 to

1:2. The PICU client population differs from that of the NICU client population in that these neonates usually were admitted from outside the hospital. However, when there is a concern for infection or patient overflow, PICU can receive client transfers from NICU.

The two medical-surgical units for pediatric patients, 13A and 14A, are differentiated by the age of their patients. Unit 13A provides nursing care to children from newborn to 4 years of age. When there is overflow from the INC, there may also be stable premature infant care provided. A premature infant room is provided where there is a nurse on duty at all times. 13A has a capacity of 25 beds, with nurse to patient ratios ranging from 1:2 to 1:5.

The medical-surgical 14A provides nursing care to pediatric patients from the ages of 4 years to 19 years. The bed capacity is 22 beds, with a nurse to patient ratio of 1:2 to 1:4.

Occasionally there is a mixture of clients at a variety of ages on either care unit. This most often occurs when one of the units is closed and overflow patients go to one of the other pediatric med-surgical

floors. Primary nursing care is provided on all of these nursing units.

#### Study Procedure

Initial access to the study participants was obtained with permission of the Department Director or the assistant head nurse to approach their staff for the purpose of seeking research volunteers (see Appendix C). A notice was posted in an accessible place to list the date and time of the study invitation/in-service.

On designated days, the investigator met with available nurses to give a description of the study. The nurses were advised that the procedure would take only ten minutes. The nurses were cautioned against talking amongst themselves concerning their responses to the questionnaire. Nurses were advised of the criteria to participate in the study.

Criteria for inclusion in the study were:

1. Current employment on one of the designated units;
2. Non agency status; and
3. More than one year's nursing experience.

The practice requirement was included to try to eliminate the effects of orientation stress. The

intent was to measure perceived level of burnout regardless of the potential stressors associated with orienting to the nursing unit.

An attempt was made to avoid mentioning the word burnout during the orientation session for this research. The word burnout was also eliminated in the Maslach Burnout Inventory (Maslach, 1982). This was an attempt to not bias the population before the start of the data collection. The word stress rather than burnout was used to decrease the subjects sensitization to this concept, as suggested by Maslach (1982). Sensitization to the concept of burnout might result in the manipulation of subject response in favor of an increase in response scores on the MBI tool. Previous exposure to stress and burnout classes could not be controlled by the investigator.

Questionnaires were then handed to the respective nurses to be completed during the meeting or at home. They were advised that the completion of the questionnaires should take no more than 15 to 20 minutes. Stamped, addressed envelopes were provided for those participants who preferred to complete the questionnaire during their rest period or at home. A letter of invitation (see Appendix D) and additional



questionnaires with individual envelopes were left in a visible place on the unit for staff who were unable to attend the meeting. A large envelope was provided on the unit for the depositing of completed and individually sealed questionnaires.

The invitation to participate in the study was extended to all units during a two week period. The presentation for participation was given at various times during the day to increase nursing staff exposure and to gain interest in the study. The final day for data collection took place one month after the initiation of data collection.

#### Instruments

##### Maslach Burnout Inventory

The instrument used in this study was the Maslach Burnout Inventory (MBI). The MBI is a 22-item self-administered questionnaire. It is designed to assess three components of the burnout syndrome through the use of three separate subscales: emotional exhaustion, depersonalization, and personal accomplishment.

The Emotional Exhaustion subscale is the first component. It consists of nine items which assesses feelings of being emotionally overextended and exhausted by one's work. It contains such phrases as

"I feel like I am at the end of my rope." The second component is the Depersonalization subscale. It consists of five items which measures an unfeeling and impersonal response towards recipients of one's service, care, treatment, or instruction. An example of this is the phrase; "I don't really care what happens to some clients." The Personal Accomplishment subscale is the third component, which assesses feelings of competence and successful achievement in one's work with people. It consists of eight items, reflecting such statements as "I feel I'm positively influencing other people's lives through my work (see Appendix A for questionnaire).

Burnout is conceptualized as a continuous variable. It's value ranges from low, moderate, to high degrees of perceived feelings of stress.

The level of the subject's burnout in each of the three subscales is assessed, using a six-point Likert scale. The scores for each subscale are considered separately and are not combined into a single total score. The scores are considered high if they are in the upper third of the normative distribution, average if they are in the middle third, and low if they are in the lower third. This normative distribution was

derived by Maslach through the testing of health professionals from a variety of backgrounds.

Reliability coefficients for the subscales are reported as .90 for Emotional Exhaustion; .79 for Depersonalization; and .71 for Personal Accomplishment. The standard error of measurement for each was 3.80 for Emotional Exhaustion; 3.16 for Depersonalization; and 3.78 for Personal Accomplishment. Internal consistency was estimated by Chronbach's coefficient alpha, however the authors do not report the coefficient value in their published data (Maslach & Jackson, 1981).

Reliability coefficients reported by Maslach and Jackson (1981) are based on samples independent of those used during the item selection process. This was purposely done to avoid any inflation of the reliability estimates.

Test-retest reliability of the MBI has been reported by data collected from two samples. The first group consisted of graduate students in social welfare and administrators in a health agency (n=53). The two test sessions were separated by a time interval of two to four weeks. The test-retest reliability coefficients for Emotional Exhaustion, Depersonalization, and Personal Accomplishment were

.82, .60, and .80, respectively. All coefficients were at a significant level ( $p=.001$ ).

The second sample was made up of teachers ( $n=248$ ). The two test sessions were separated by a one year time interval. The test-retest reliabilities for the three subscales were .60 for Emotional Exhaustion; .54 for Depersonalization; and .57 for Personal Accomplishment (Maslach & Jackson, 1981).

The validity of the MBI was investigated by Maslach in several ways. The convergent validity was demonstrated by correlating MBI scores with behavioral ratings. The behavioral ratings were made independently by people who knew individual well. The rater was either a co-worker or spouse.

The MBI scores were then correlated with the presence of certain job characteristics that were expected to contribute to the experience of burnout. For example, physicians who spent all or most of their working time in direct contact with patients scored higher on emotional exhaustion, in comparison to those who spent their working hours in teaching or administration.

Finally, Maslach (1982) correlated MBI scores with measures of outcomes hypothesized to be related to

burnout. Based on previous theorizing and research, Maslach predicted that people experiencing burnout would be dissatisfied with opportunities for personal growth and development on the job. In a study involving 180 nurses, and social service and mental health workers, MBI scores were correlated with scores from the Job Diagnostic Survey (JDS). Scores on the JDS, which measures "growth satisfaction," were negatively correlated with emotional exhaustion and depersonalization, and positively correlated with personal accomplishment (Maslach, 1982). Correlations such as these provided substantial evidence for the validity of the Maslach Burnout Inventory.

#### Demographic Questionnaire

Additional data were collected using a demographic questionnaire designed by the author. Data concerning the subject's age, gender, marital status, number of children, education, years in nursing, years on present nursing unit, hours of care provided each week, and shift worked provide descriptive information (see Appendix B for tool).

#### Qualitative Data

An open ended question was included in the tool to give the respondents an opportunity to provide

additional information concerning any aspect of the tools or themselves that they felt was important for them to share (see demographic questionnaire).

#### Protection of Human Subjects

This study was noninvasive and involved no experimental manipulation of subjects. Confidentiality was maintained as subjects remained anonymous. The nurses were given instructions not to put their names on any questionnaires. A code number was given to each page of the questionnaires. A consent form was not used because voluntary participation was indicative of consent.

An application for research was submitted to the hospital research office. The study was reviewed by the hospital Committee on Human Research. Exempted status was granted by the committee because the study was not associated with methods that would cause unexpected harm to the subjects.

CHAPTER III  
RESULTS AND DISCUSSIONS

Results

This chapter provides a review of the results of the research data. The discussion presents information concerning the sample characteristics, the level of burnout perceived, and qualitative data provided by this sample.

Sample Demographics

Sixty-nine (69) nurses responded to the request for participation. Eleven (11) were eliminated because they had either not completed one full year on their unit, were designated as working for a nursing agency, or had not completed the questionnaires satisfactorily. There were a total of 58 pediatric nurses in the study sample.

The sample population was evenly divided between ICU and non-ICU groups, with 29 participants in each. The number of respondents from each unit did vary slightly. Eighteen (30.5%) participated from 13A, 11 (19.0%) from 14A, 8 (13.6%) from PICU, 9 (15.2%) from NICU, and 12 (20.7%) from INC (See Table 1).

Table 1. Unit Participation

	Unit	Frequency	Percent
ICU Group (n=29)	PICU	8	13.8
	NICU	9	15.5
	INC	12	20.7
Non-ICU Group (n=29)	13A	18	31.1
	14A	11	19.0

The majority of the total sample were female. In the non-ICU group, 89.7% were female; in the ICU group 100% of the respondents were female. The sample was also predominantly Caucasian (98.3%), with 1.7% (1) Asian.

The mean age of the non-ICU group was 31.9 years with a range of 23 to 44 years (s.d.=4.5). The mean age of the ICU group was 34.1 years with a range of 25 to 53 years (s.d.=7.1).

The sample identified themselves as single (27.6%), married (56.9%), divorced (10.3%), and 5.2% identified themselves in the other category (e.g.



recently separated, engaged, or 'cohabitating, involved but not legally married'). In both the ICU and non-ICU groups, there were 27.6% designated as single. In the non-ICU group 55.2% were married (58.6% in ICU group), 13.8% divorced (6.9% in ICU group), and 3.4% chose the other category (6.9% in ICU group).

In the ICU group, 48.3% had children present in the home and 51.7% did not, whereas, 51.7% of the non-ICU nurses had children, and 48.3% did not. The mean number of children in the individual households was 1.5 in the non-ICU group, and 1.7 in the ICU group. The age of the children was not determined.

In the non-ICU group, 13.8% identified themselves as having some college experience. Sixty two percent (62.1%) had a college degree, 17.2% had some post baccalaureate education, and 6.9% designated their education in the other category (e.g. 3 year diploma with 2 year ladder BSN program, MA-political science, MSN, 7 years in college, and MPA-Health Administration).

For the pediatric ICU group, 72.4% had a college degree, 17.2% had some post baccalaureate preparation, and 10.3% identified themselves as having other educational experience.

The subjects were asked to identify their basic preparation in nursing. In the non-ICU group, 27.6% were diploma/ADN prepared nurses, and 72.4% were BSN prepared. In the ICU group, 10.3% were ADN/diploma prepared, and 89.7% were BSN prepared nurses.

In terms of their nursing experience, the non-ICU group stated that they had spent from 13 to 264 months in nursing practice. The mean was 97.7 months, ( $sd=62.8$ ). Of the ICU group, they had spent from 48 to 360 months in nursing practice. The mean was 115.3 months ( $sd=68.9$ ) of experience.

An independent t test was done to compare the difference in the mean times spent in nursing between the ICU ( $M=97.7$ ) and non-ICU ( $M=115.3$ ) groups. The t value was  $t=-1.02$  ( $p=0.31$ ). There was no statistically significant difference noted.

In order to verify the consistency in time of working on their respective units, the subjects were asked to indicate the number of months that they had spent working on their units. The time spent ranged from 12 to 188 months, with a mean of 68.6 months ( $sd=51.7$ ) for the non-ICU group. The pediatric ICU group had spent 24 to 300 months on their unit. The mean was 92 months ( $sd=63.8$ ). There was no significant

difference found between these two groups in terms of the time spent on their respective units ( $t=-1.01$ ,  $p=0.31$ ).

This sample worked a variety of shifts. The choices given were days (7am-3pm), evenings (3pm-11pm), nights (11pm-7am), and rotating shifts, which was any combination of days, evenings, and nights.

Of the non-ICU group, 37.9% worked days, 24.1% worked evenings, 17.2% worked nights, and 20.7% worked rotating shifts. Of the pediatric ICU nurses, 13.8% worked days, 41.4% evenings, 17.2% nights, and 27.6% worked rotating shifts. There was, therefore, a greater participation of day nurses in the non-ICU group. Whereas, for the ICU group, there were more evening nurses responding than ICU nurses from other shifts.

In terms of the number of hours worked per week, the ICU nurses worked a mean of 33.2 hours each week ( $sd=7.46$ ). The non-ICU nurses worked a mean of 32.0 hours each week ( $sd=8.58$ ).

Finally, the nurses were asked to identify a religious preference. Of the non-ICU group, 44.8% identified themselves as Protestant, 27.6% as Catholic, 6.9% as other (7th Day Adventist), and 20.6% as having

no special affiliation. For the ICU group, 58.6% were Protestant, 6.9% Catholic, 6.9% other (Buddhism), and 27.6% as no religious affiliation.

The demographic characteristics were compared between the ICU and non-ICU groups with the use of independent t tests and chi squared analyses. No significant differences were found between these two groups (see Table 2 for a summary of these sample characteristics).

Table 2. Sample Characteristics

Characteristics	Sample Groups		Significant Difference	
	ICU Group	Non-ICU Group	Stat Used	p-value
N=	29	29		
Age (M)	34	32	t	n. s.
Gender (%)				
Female	100	89.7	x <sup>2</sup>	n. s.
Male	0	10.3		
Race (%)				
White	96.6	100	x <sup>2</sup>	n. s.
Asian	3.4	0		
Marital Status (%)				
Single	27.6	27.6	x <sup>2</sup>	n. s.
Married	58.6	55.2		
Divorced	6.9	13.8		
Other	6.9	3.4		
Children in Home (%)	48.3	51.7	x <sup>2</sup>	n. s.
Education (%)				
Some college	0	13.8	x <sup>2</sup>	n. s.
College Degree	72.4	62.1		
Post-Baccalaureate	17.2	17.2		
Other	10.3	6.9		
Nursing Prep (%)				
AA/Diploma	10.3	27.6	x <sup>2</sup>	n. s.
BA/BSN	89.7	72.4		
Religion (%)				
Protestant	58.6	44.8	x <sup>2</sup>	n. s.
Catholic	6.9	27.6		
None	27.6	20.7		
Other	6.9	6.9		

Table 2. Sample Characteristics (con't.)

Characteristics	Sample Groups		Significant Difference	
	ICU Group	Non-ICU Group	Stat used	p-value
Time in Nursing in months (SD) Range	127.6 (73) 48 - 360	97.7 (62.8) 13 - 264	t	n. s.
Time on Unit in months (SD) Range	92 (63.8) 24 - 300	68.6 (51.7) 12 - 188	t	n. s.
Shifts Worked in percent (#) Days Evenings Nights Rotating	13.8 (4) 41.4 (12) 17.2 (5) 27.6 (8)	37.9 (11) 24.1 (7) 17.2 (5) 20.7 (6)	t	n. s.

Maslach Burnout Inventory

Maslach Burnout Inventory (Maslach, 1982)

identified three components of burnout within the inventory: emotional exhaustion, depersonalization, and personal accomplishment. Each subscale was examined in relation to a low, moderate, and high score (see Table 3 for scoring ranges).

Table 3. Maslach Burnout Inventory Scoring Analysis

Subscale	Level	Score
Emotional Exhaustion (EE)	Low	≤ 18
	Moderate	19 - 26
	High	≥ 27
Depersonalization (DP)	Low	≤ 5
	Moderate	6 - 9
	High	≥ 10
Personal Accomplishment (PA)	Low	≤ 40
	Moderate	39 - 34
	High	≥ 33

Of the general pediatric group, the nurses were found to score moderately in emotionally exhaustion (M=21.31, sd=9.60), moderately in depersonalization (M=7.8, sd=6.31), and also scored moderately in personal accomplishment (M=38.51, sd=4.77). For the ICU group, they scored at the moderate level for emotional exhaustion (M=20.5, sd=7.7), moderate depersonalized (M=8.2, sd=5.4), and personal accomplishment (M=35, sd=8.9). Using the t test, subscale scores were examined for significant differences in any of the subscales between these two groups. There were no significant differences found (see Table 4).

Table 4. T-test Comparison of Self-Perceived Levels of Burnout Between Pediatric ICU and Non-ICU Nurses

MBI Subscales		Groups		t value
		ICU n=29	Non-ICU n=29	
Emotional Exhaustion	(M) (SD)	20.52 7.71	21.31 9.60	0.35 n. s.
Depersonalization	(M) (SD)	8.21 5.42	7.80 6.31	-0.27 n. s.
Personal Accomplishment	(M) (SD)	35.03 8.90	38.52 4.77	1.86*

\*p=0.07

However, on the personal accomplishment scale the t value approached significance with  $t=1.86$  ( $p=0.07$ ).

The ICU group scored higher in their perceived feelings of personal accomplishment. This suggests that the ICU group had perceived themselves as have greater feelings of personal accomplishment than the non-ICU group.

According to Coffey, Skipper, & Jung (1988), there is a difference in the perceived stress level when working certain shifts. Nurses stated that day shift was less stressful than all other shifts. This sample was therefore evaluated, comparing the groups, ICU versus non-ICU within shifts, day shift in contrast to non-day shift. The basis of comparison was in relation



to the level of burnout perceived when working day or non-day shifts (see Table 5).

Table 5. T-Test Comparison of Self-Perceived Level of Burnout Between Pediatric ICU and Non-ICU Nurses Who Work Day Shift

MBI Subscales		Groups		t value
		ICU n=11	Non-ICU n=4	
Emotional Exhaustion	(M) (SD)	23.75 8.42	23.00 11.12	-0.14
Depersonalization	(M) (SD)	12.00 6.68	10.18 7.43	-0.45
Personal Accomplishment	(M) (SD)	38.25 4.99	38.91 5.68	0.22

There was no significant difference found in the MBI scores when the day shift ICU group was compared to the non-ICU day shift group.

The non-day shift groups were then evaluated, and there was no significant difference noted in the subscales of emotional exhaustion and depersonalization. There was noted a difference between the ICU and non-ICU groups, working non-day shifts, between the personal accomplishment scores. The t value was 1.77 ( $p=0.08$ ). This approaches significance, with the non-day shift ICU nurses

experiencing higher levels of personal accomplishment than the non-ICU nurses (see Table 6).

Table 6. T-Test Comparison of Self-Perceived Level of Burnout Between Pediatric ICU and Non-ICU Nurses Who Do Not Work Day Shift

MBI Subscales		Groups		t value
		ICU n=25	Non-ICU n=18	
Emotional Exhaustion	(M) (SD)	20.00 7.64	20.28 8.72	0.11
Depersonalization	(M) (SD)	7.60 5.09	6.33 5.21	-0.79
Personal Accomplishment	(M) (SD)	34.52 9.34	38.28 4.28	1.77*

\*p=0.08

The groups were then collapsed into one, and the pediatric nurses who worked days were compared to the pediatric nurses who did not work days. There were no significant differences found. Therefore, there was no difference in the perceived level of burnout whether the nurses worked day shift or any other shift (see Table 7).

Table 7. T-test Comparison of Self-Perceived Level of Burnout Between Pediatric Nurses Who Work Days Versus Those Who Do Not Work Days

MBI Subscales	N	Shift		t-value
		Days	Non-Days	
		15	43	
Emotional Exhaustion	(M) (SD)	23.20 10.18	20.12 8.01	1.06
Depersonalization	(M) (SD)	10.67 7.05	7.07 5.12	1.82
Personal Accomplishment	(M) (SD)	38.73 5.34	36.09 7.80	1.45

Lewiston, Conley, and Blessing-Moore (1981) had found that the number of hours worked had an effect on the development of burnout. For this study, the number of hours were correlated with each burnout subscale to explore the possibility of an association. No significant correlations were found (see Table 8).

Table 8. Correlation of Hours Worked and Perceived Level of Burnout of ICU and Non-ICU Pediatric Nurses

MBI Subscales	stat.	Hours	
		ICU	Non-ICU
Emotional Exhaustion	(r)	.250	.203
	(p)	.192	.290
Depersonalization	(r)	.103	.228
	(p)	.595	.235
Personal Accomplishment	(r)	.057	.332
	(p)	.770	.088

df=27

In this population, there was no relationship between the level of burnout perceived and the number of hours worked per week.

In an attempt to compare this group of nurses with other groups, the data was compared to Maslach's test sample of medical personal. This test sample, identified as "Medicine" consisted of nurses from a variety of areas, physicians, pharmacists, and social workers. The sample size was 1,104 people. The means for the emotional exhaustion, depersonalization, and personal accomplishment subscales were 22.2, 7.1, and 36.5, respectively.

The pediatric ICU and non-ICU groups were combined into one sample to statistically compare this small

sample to the Maslach sample. T tests demonstrated no significant differences between these two samples (see Table 9).

Table 9. T-test Comparisons Between Samples of Pediatric Nurses and Maslach Medicine Groups

		<u>Sample Populations</u>		
		Pediatric Nurses	Maslach Sample	t value
MBI Subscales	N	52	1104	
Emotional Exhaustion	(M) (SD)	20.91 8.64	22.2 9.53	-0.835
Depersonalization	(M) (SD)	8.00 5.83	7.1 5.22	1.06
Personal Accomplishment	(M) (SD)	36.78 7.29	36.5 7.34	0.232

Therefore, though the pediatric nursing sample was small and a specialty group, their scores were similar to Maslach's test group of 'medical' professionals.

In summary, there were moderate levels of burnout found in both the ICU and non-ICU groups. There were no significant differences in the ICU and non-ICU groups in the areas of emotional exhaustion, depersonalization, and personal accomplishment. In addition, the data for the entire sample was broken down into groups by shift worked, time in nursing, time on unit. No significant differences were found when

these sample demographic characteristics (hours worked, shift worked, time in nursing, and time on nursing units) were compared to the MBI subscales.

#### Qualitative Data

An open ended question was provided at the end of the questionnaire. The purpose was to provide information concerning the adequacy of the tools and to provide more specific information concerning their perception of stress. Out of the overall sample, 28 (48%) provided additional data. Ten (17%) responded from 13A, 6 (10%) from 14A, 7 (12%) from INC, 3 (5%) from NICU, and 2 (3%) from PICU.

The individual responses from each of the two groups were similar to the sample as a whole. There were no responses that reflected concerns specific to ICU or non-ICU nursing care or setting.

The responses can be grouped into three categories:

1. areas of identified stress,
2. areas of difficulty concerning tool completion by the nurses, and
3. suggestions for improvement of the tools.

There were several areas of 'stress' identified. These areas were divided into four different classifications;

- a. client related,
- b. peer related,
- c. job related, and
- d. personal related factors.

In client related statements, some nurses mentioned that the level of client health or the acuity level with the increasing complexity of patient care effected their response to the MBI. The effect of client stress and the increased indigence of the client population was also addressed. Some nurses also stated that there was an 'over exposure' to clients and a need for 'time out.' The frequency of personal involvement in client deaths and attendance at funerals were also identified as effecting their stress levels.

Peer related responses mentioned overexposure to peers and peer stress. They stated that the presence or absence of 'team work' or peer support also effected their level of stress.

Job related responses included concerns about the effect of irregular shifts, the frequency of weekend work, and the effects of understaffing. There were responses related to the time spent working in their specialty area and related to whether nursing would be chosen again as a field of study. There was also

mention of environmental factors, such as the perceived feelings of control within their environment, limited environmental space within to work, resulting in close physical proximity of staff and clients, and feelings of invasion of space. Nursing literature supports the validity of these concerns (Astbury & Yu, 1982; Keane, 1985).

There were a few veiled statements in reference to management style on the unit and the effects of the bureaucratic system within the hospital. The statements were not specific enough to identify components of management and bureaucratic style that induced burnout.

The final area involved personal factors that effected their levels of stress. Personal life stressors, the presence of premenstrual stress, the presence of multiple jobs, and concern for how these questions effect their 'non-work life.'

Responses addressing the questionnaire and the ability to respond to it were limited. One person found the tool (MBI) difficult to answer. She felt that there were too many choices and that a three level Likert scale, rather than a six level, would have been easier to answer. Another similar response was that



"the questions [were] hard to fit into scale, [that it was] hard to judge on this scale with some of these questions."

These responses provided another view of aspects of stress. The personal comments of the respondents provided a different way to examine their feelings. The impact of these feelings on their MBI scores is not clear.

#### Discussion

The study was able to adequately address the research questions under investigation. There was a moderate level of burnout perceived by pediatric nurses in the study. However, the study yielded a number of unexpected findings.

First of all, the data indicates that pediatric nurses in ICU and non-ICU settings perceived themselves as experiencing moderate levels of burnout. However, no significant differences were found when the two groups were compared, nor were relationships found between the demographic characteristics, such as time in nursing, time on their units, hours worked per week, and shift worked, and the level of burnout. The data appears to indicate that these two groups of pediatric

nurses, ICU and non-ICU, are more similar than dissimilar.

Research literature (Keane, Ducette, & Adler, 1985; Kelly & Cross, 1985; Maloney, 1982) has suggested that intensive care units are different from non-intensive care units because of such environmental characteristics as the nurse to patient ratios, level of patient acuity, and the number of monitors used to measure changes in their clients' physiologic status. The author has noted that the nurse to patient ratios have not really changed in the non-ICUs in the study. However, the level of acuity and number of monitored beds have increased. In addition, in situations of crisis, the non-ICUs have taken overflow, though identified as stable, clients from the ICU areas. Therefore, with these added potential sources of stress, it is even more probable that the non-ICU pediatric nurses might perceive a level of burnout similar to the ICU pediatric nurses.

Another factor to consider in terms of these findings is the time frame during which the study was conducted. The research was conducted during the last month of the summer. It is not clear whether this time

period might impact the nursing staff differently than any other time of the year.

An additional concern is the seasonal patterns of disease. This can have a significant impact on client acuity and frequency of hospitalization. For example, during the summer months there are fewer respiratory infections. For some patient populations this can greatly affect the acuity level of the pediatric client population (e.g. respiratory syncytial virus, threats to immunocompromised clients). This may also be a time when there are more accidents (e.g. near drownings, motor vehicle related traumas, etc.). Overall, this time period may be perceived as less problematic in general to the health status of pediatric clients.

At the end of the summer, the weather is usually better. There is more sunshine and warmer temperatures. This is the traditional time during which most nurses plan to complete summer vacations. In addition, there may be more opportunities for outdoor recreation and social activities than any other time of the year for the hospital staff as a whole. These factors may inadvertently limit the level of perceived burnout.

It is also possible that this is a true measure of this population. These nurses may be stressed, but not extremely burned out. Their multiple methods of dealing with stress, such as the use of exercise and adequate time off (Walker, 1982), may result in such moderate scores. It might have been helpful to administer this tool to another population of pediatric nurses at another metropolitan hospital. This would provide additional information in terms of whether this population pediatric nurses were different from any other population of pediatric nurses.

The conceptual framework proposed by Maslach identified stress associated with professions involved with 'people work,' such as pediatric nursing, and the perceived level of burnout. This study supported this relationship while investigating stresses associated with pediatric nursing and burnout.

CHAPTER IV  
CONCLUSION, IMPLICATIONS, LIMITATIONS AND  
RECOMMENDATIONS

Conclusion

This study has examined the level of burnout of pediatric nurses working in intensive care and non-intensive care units. Using the Maslach Burnout Inventory, 58 nurses self-assessed their levels of burnout. The results verified that there was burnout perceived by this sample, though only moderate levels were identified. This study also found that there were no significant differences between the perceived levels of burnout between the ICU and non-ICU nurses. This pediatric sample also scored at a similar level as the Maslach "Medicine" population. This seems to indicate that the level of burnout perceived was not unique in this sample but rather was similar to a larger study.

Nursing research (Harris, 1989) has attempted to delineate between intensive care and non-intensive care settings in the investigation of stress and burnout in nursing. This study of pediatric nurses did not find a difference in the two settings. It may be that the definitive variable is not the setting, but is

pediatrics, or nursing itself. This data is inconclusive and further study is needed.

#### Implications

The implications of this study for nursing practice are limited. The moderate levels of burnout in this sample indicates that there is no urgent need to intervene with stress reduction or management programs. However, the results of the study are not conclusive. Though nursing has the potential to provide high levels of stress, leading to burnout, a significant level of burnout was not found in this population. Explanation for these findings are varied. The following discussion reviews the issues that limit the study.

#### Limitations

As noted in the qualitative comments, the Maslach Burnout Inventory did not identify if there were nurses involved in working repeated days of overtime or double shifts. If, hypothetically, there had been identified a greater number of pediatric non-ICU nurses working over time or double shifts, this could possibly explain why these two samples were similar in their scores. The hypothetical higher levels of burnout in this group

would then 'rival' the burnout scores of the pediatric ICU nursing care.

A few of the nurses also stated that they had difficulty with the negative flavor of the Maslach Burnout Inventory. One person stated "hopefully people don't feel as bad as some of these questions imply." This possibly indicates the unwillingness to rate their nursing experience in these terms. It may also indicate the need for an additional tool that might measure components of nursing care with fewer negative connotations.

The methodologic question of when the research questionnaire was completed was also raised.

"This could be very misleading, I may have different answers if it was the end of my shift rather than at the beginning. If I had a bad night I would probably have had answers. Perhaps you should ask if it is being filled out at the end or the beginning of the shift."

Instructing the nurses to complete the tools after work may provide a set of common instructions and limit the effects of pre-work, or non-nursing sources of stress, on the study results.

A few others also stated that the tool should include clear identification of sources of stress (e.g. overtime, understaffing, or limited peer support). The Maslach Burnout Inventory is an excellent tool for measuring levels of burnout. It has been shown to have a history of reliability and validity that few instruments have produced. However, this tool is a generic tool. It was meant to be applied to any population who do 'people work' (Maslach, 2982). However, it is unable to identify characteristics specific to certain jobs, such as nursing, that might give direction in terms of the sources of burnout.

It is therefore possible that research of burnout in nursing populations would best be served by developing research methods that incorporate burnout data with additional tools measuring specific components that are specific to nursing.

There was no attempt to interview nurses who chose not to participate in the study. The investigator can not identify the reasons why the subjects chose to participate or not to participate. The research results are therefore limited in generalizability to similar self-selected populations.



Finally, stress and burnout are phenomena which may change from time to time. It is possible that repeated measures would have been more appropriate. This would mean accessing this population for repetitive surveys. The nurses would then be asked to self assess their levels of stress and burnout at several times during the year. There would then be a series of scores that could be used to project a pattern, representing a change in burnout over time.

#### Recommendations

This study has generated many questions concerning the measurement of burnout in pediatric intensive care and non-intensive care nurses. The following list identifies components of research methods that may further research in the area of nurse burnout.

1. A study measuring burnout with repeated sampling of the population through the year;
2. A study using additional tools which can identify components specific to nursing (overtime stress, increased patient acuity, and social support measures;
3. A descriptive study component, using qualitative data to allow nurses to describe

the experience of burnout in a non-quantitative method; and

4. A descriptive study comparing two separate hospital populations of pediatric nurses.

In summary, this study identified the presence of burnout perceived by pediatric nurses working in intensive care and non-intensive care settings. Although the results were not able to identify significant differences between these two groups, they were able to substantiate the presence of burnout, and provide direction for further study of this phenomenon.

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APPENDICES



APPENDIX A Maslach Burnout Inventory

## Human Services Survey

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 answering this survey please think of these people as recipients of the service you provide, even though you may use another term in your work.

On the following page there are 22 statements of job-related feelings. 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. An example is shown below.

### Example:

---

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

---

### HOW OFTEN

0 - 6

Statement:

\_\_\_\_\_ I feel depressed at work.

If you *never* feel depressed at work, you would write the number "0" (zero) under the heading "HOW OFTEN." If you *rarely* feel depressed at work (a few times a year or less), you would write the number "1." If your feelings of depression are fairly frequent (a few times a week, but not daily) you would write a "5."



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# Human Services Survey

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

**HOW OFTEN**  
0 - 6

Statements:

1. \_\_\_\_\_ (EE) I feel emotionally drained from my work.
2. \_\_\_\_\_ (EE) I feel used up at the end of the workday.
3. \_\_\_\_\_ (EE) I feel fatigued when I get up in the morning and have to face another day on the job.
4. \_\_\_\_\_ (PA) I can easily understand how my recipients feel about things.
5. \_\_\_\_\_ (DP) I feel I treat some recipients as if they were impersonal objects.
6. \_\_\_\_\_ (EE) Working with people all day is really a strain for me.
7. \_\_\_\_\_ (PA) I deal very effectively with the problems of my recipients.
8. \_\_\_\_\_ (EE) I feel burned out from my work.
9. \_\_\_\_\_ (PA) I feel I'm positively influencing other people's lives through my work.
10. \_\_\_\_\_ (DP) I've become more callous toward people since I took this job.
11. \_\_\_\_\_ (DP) I worry that this job is hardening me emotionally.
12. \_\_\_\_\_ (PA) I feel very energetic.
13. \_\_\_\_\_ (EE) I feel frustrated by my job.
14. \_\_\_\_\_ (EE) I feel I'm working too hard on my job.
15. \_\_\_\_\_ (DP) I don't really care what happens to some recipients.
16. \_\_\_\_\_ (EE) Working with people directly puts too much stress on me.
17. \_\_\_\_\_ (PA) I can easily create a relaxed atmosphere with my recipients.
18. \_\_\_\_\_ (PA) I feel exhilarated after working closely with my recipients.
19. \_\_\_\_\_ (PA) I have accomplished many worthwhile things in this job.
20. \_\_\_\_\_ (EE) I feel like I'm at the end of my rope.
21. \_\_\_\_\_ (PA) In my work, I deal with emotional problems very calmly.
22. \_\_\_\_\_ (DP) I feel recipients blame me for some of their problems.

(Administrative use only)

cat.

cat.

cat.

EE: \_\_\_\_\_ DP: \_\_\_\_\_ PA: \_\_\_\_\_

Burnout

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APPENDIX B Demographic Questionnaire

Code number \_\_\_\_\_

Your Unit \_\_\_\_\_

Demographic Data Sheet

Directions: Please check the area in each section which most describes you.

(a) Your sex: \_\_\_\_\_ (1) male \_\_\_\_\_ (2) female

(b) Your age: \_\_\_\_\_ years

(c) Your race:  
(check one group only) \_\_\_\_\_ (1) Asian, Asian American  
\_\_\_\_\_ (2) Black, Afroamerican  
\_\_\_\_\_ (3) Latino, Hispanic,  
Mexican American  
\_\_\_\_\_ (4) Native American,  
American Indian  
\_\_\_\_\_ (5) White, Caucasian  
\_\_\_\_\_ (6) Other (please specify  
\_\_\_\_\_ )

(d) What was the highest level you completed in school  
(check only one answer.) \_\_\_\_\_ (1) completed high school  
\_\_\_\_\_ (2) some college  
\_\_\_\_\_ (3) completed four years  
of college  
\_\_\_\_\_ (4) some postgraduate work  
or degree  
\_\_\_\_\_ (5) other (please specify  
\_\_\_\_\_ )

(e) What was your basic preparation in nursing?  
\_\_\_\_\_ (1) A.A./Diploma  
\_\_\_\_\_ (2) B.A./B.S./B.S.N.

(f) What is the level of your primary position? (Check only one)  
\_\_\_\_\_ (1) staff member  
\_\_\_\_\_ (2) supervisor/manager  
\_\_\_\_\_ (3) administrator

(g) How many hours per week do you work at the job indicated  
above? \_\_\_\_\_ hours per week

(h) What shift do you currently work?  
\_\_\_\_\_ (1) days \_\_\_\_\_ (3) nights  
\_\_\_\_\_ (2) evenings \_\_\_\_\_ (4) rotating (please specify)

---



APPENDIX C Letter to Department Directors

Oregon Health Sciences University  
School of Nursing

Dear Dept. Director,

I am a graduate student currently working on my master's thesis on "Nurse Stress in ICU and non-ICU pediatric settings." I would like to invite your staff nurses to participate in my study.

My study recently passed the Committee on Human Research. Pat Wilson has also been contacted.

I would like to visit your unit some time after August 14, 1989. I propose to spend no more than 5 minutes presenting information concerning research participation. It should take no more than 20 minutes of the nurses time to complete the questionnaires. The nurses need not complete the questionnaires on your unit, and can take the materials home.

The materials provided in this packet will give you an example of the materials that will be provided for your nurse staff. I will give you a call in a few days to set up times when I may come on your unit to invite your nurses to participate. Please call me at 2286800 if you have any questions.

Thank you for your time and support.

Sincerely,

Tonya Drayden, RN



APPENDIX D Invitation to participation

Oregon Health Sciences University  
School of Nursing

Dear nurse colleagues,

I am a graduate student currently working on my master's thesis on "Nurse Stress in ICU and non-ICU pediatric settings." I am also a fellow staff nurse on 13A.

The purpose of this research is to provide descriptive information concerning pediatric nursing in ICU and non-ICU settings. I am inviting you to participate in this study.

Your participation is voluntary and there will be no consequence if you choose not to participate. Your part in this study involves completing a tool and a demographic questionnaire. It will take approximately 20 minutes of your time. You are requested not to write your name anywhere on the provided materials. Your response will therefore not be identified individually, but will be combined with others for reporting results. Employers and supervisors will not have access to information about individuals or whether or not you participated. I will be available for questions and/or comments during the period that the questionnaires are on your unit.

The benefits will include a workshop held by the investigator to share with you the results of this study and more information on stress (whether you participated or not), and your part in initiating future research in nursing. Your participation can also be counted towards Nurse-CAP.

I will be visiting your unit on \_\_\_\_\_. The study will then begin. I will leave research materials with mailing envelopes for you on your units. If you have any questions, please feel free to call me at 2286800. Completed questionnaires can be mailed to me or left in the large envelope located on your unit in a designated area. The study will end September. Unused or completed unmailed questionnaires will be picked up on that date. I am looking forward to meeting you and sharing more information about my study.

Sincerely,

Tonya Drayden, RN

AN ABSTRACT OF THE THESIS OF  
TONYA DRAYDEN  
FOR THE MASTERS OF SCIENCE  
IN NURSING

DATE OF RECEIVING THIS DEGREE: June 1990

TITLE: PEDIATRIC NURSE BURNOUT IN  
INTENSIVE CARE AND  
NON-INTENSIVE CARE SETTINGS

APPROVED: \_\_\_\_\_

Pam Hellings, R.N., PhD.

Thesis Advisor

There has been research documenting stress and the development of burnout in a variety of health care settings. There has been limited research comparing the presence of burnout in pediatric intensive care and non-intensive care settings. The purpose of this study is to examine level of burnout perceived by pediatric nurses in these patient care settings.

The literature review and conceptual framework suggest a relationship between stress and burnout, intensive care and non-intensive patient care settings,

and pediatric nursing. The study sought to answer the following questions:

1. What is the level of burnout of pediatric nurses in ICU and non-ICU settings?; and
2. Are there demographic characteristics which are related to the level of burnout?

Fifty-eight (58) pediatric nurses, employed at a Pacific northwestern university hospital, volunteered to participate in the study. Twenty-nine (29) were designated ICU nurses, because they worked in the intermediate neonatal care unit, the neonatal intensive care unit, or the pediatric intensive care unit. Twenty-nine (29) were designated non-ICU nurses, because they worked in one of the two units identified as general pediatric medical-surgical units.

Burnout was measured by the Maslach Burnout Inventory (MBI). The MBI measures three components of burnout; emotional exhaustion, depersonalization, and personal accomplishment. A demographic questionnaire was also developed to assist in interpretation of the burnout scores.

The data indicated that there were moderate levels of burnout perceived by the pediatric intensive care nurses, as well as the pediatric non-intensive care nurses. There were no significant differences between

these two groups. The level of burnout was similar to that found in Maslach's original test group (Maslach, 1982). In addition, the demographic data did not significantly correlate with the perceived levels of burnout. There were no demographic variables which were significant in association with the levels of burnout perceived.

It is not clear whether this result indicates a need for intervention. The generalizability of these findings are limited. This suggests that other pediatric comparison groups may be useful in clarifying the significance of these findings. The implications to nursing practice would be in areas of social support, job satisfaction, and nurse retention within the profession.