2000

Is There a Relationship Between Hardiness and Burnout in Full-Time Staff Nurses Versus Per Diem Nurses?

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IS THERE A RELATIONSHIP BETWEEN HARDINESS AND BURNOUT IN FULL-TIME STAFF NURSES VERSUS PER DIEM NURSES?

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A THESIS

Submitted to
Grand Valley State University
in partial fulfillment of the requirements for the
degree of

MASTER OF SCIENCE IN NURSING

Kirkhof School of Nursing

2000

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ABSTRACT

IS THERE A RELATIONSHIP BETWEEN HARDINESS AND BURNOUT IN FULL-TIME STAFF NURSES VERSUS PER DIEM NURSES?

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Recent advances in technology and the focus on cost-effectivc care may subject nurses to increasing demands in their jobs. These demands can lead to an increased level of stress and burnout. The concept of hardiness has been linked to burnout in studies among various groups. Hardiness is a set of personality characteristics that may function as a resource in coping with stress. This study examined the relationship between hardiness and burnout in full-time staff nurses and per diem nurses. The Neuman systems model served as a theoretical framework for the concepts of hardiness and burnout. A descriptive correlational design was used to assess these relationships. Seventy-five nurses in two area hospitals were surveyed using the Staff Burnout Scale for Health Professionals, the Cognitive Hardiness Scale, and a socio-demographic questionnaire. Data were tested using Pearson's r correlation and t-tests. The Hypotheses:1) Per diem nurses will have more hardiness than full-time staff nurses, and 2) Per diem nurses will have less burnout than full-time staff nurses were not supported. A moderately strong, direct, statistically significant relationship was found between hardiness and burnout among the total subjects. No significant differences were found between per diem nurses and full-time staff nurses. Demographic variables had no significant relationship with hardiness or burnout. Implications of the study include further investigation into the concept of hardiness. A universal definition of hardiness, and new ways of measuring hardiness is needed in order to utilize interventions based on one's level of hardiness and burnout.

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CHAPTER ONE

INTRODUCTION

Nursing is a profession with a high degree of commitment and personal involvement. Advances in technology and increasing demands subject nurses to repeated stressors. Exposure to repeated stressors causes nurses to have discouragement in their jobs and a decreased concern for the patient, known as burnout. Two major reasons why nurses leave hospitals are stress and burnout (Tierney & Lavelle, 1997). Maslach (as cited in Tierney & Lavelle, 1997) defined burnout as a syndrome of physical and emotional exhaustion identified by negative attitudes, poor professional self-concept, and a loss of empathy for the patient. Pines and Anderson (as cited in Simoni & Paterson, 1997) describe burnout as a stress syndrome particular to caregivers. It is distinguished as physical, mental, and emotional exhaustion. Physical exhaustion is characterized by symptoms of low energy, chronic fatigue, weakness, and weariness. Mental exhaustion is seen as negative attitudes toward oneself, toward work, and toward life. Characteristics of mental exhaustion are: detached concern for patients, intellectualization of stressful situations, withdrawal from patients and coworkers, and reliance on other staff members for support. Finally, emotional exhaustion can be defined as feelings of depression, helplessness, hopelessness, and entrapment (Oehler, Davidson, Starr, & Lee, 1991)

Stressors encountered in nursing include: dealing with death and dying, demands of clients and family members, and inadequate staffing. All of these stressors are within an organizational structure recognized for draining motivation and morale (Drucker, 1991). Other causes of burnout include powerlessness, trivial support for important decisions, and lack of appreciation by clients (Tierney & Lavelle, 1997). Hospital and nursing administration, staff educators, and nurses play a role in addressing these problems, especially because they directly affect retention and productivity of nursing personnel (Tierney, & Lavelle, 1997).

In recent years, the concept of hardiness has been suggested as a burnout resistant factor (Tierney, & Lavelle, 1997). Hardiness is a set of personality characteristics that allows a person to be resistant to certain stressors. Hardiness was first studied by Kobasa (1979), who found that hardiness is a combination of attitudes, beliefs, and behavioral tendencies that help a person adapt and not experience the reaction to the stressor. Kobasa (1979) identified three components to the concept of hardiness: commitment, control, and challenge (as cited in Collins, 1996). These characteristics are thought to be innate to one's personality, yet, research is showing that hardiness can be learned and developed over time (Tierney & Lavelle, 1997).

First, commitment is the ability to believe in the truth of who one is and to become involved in life. Commitment allows a person to think past oneself and think about others. This thinking creates a sense of purpose which acts to diminish a stressor. Second, control refers to the belief that one can influence life events rather than feeling helpless. Individuals with control look for explanations to life events. Seeking explanation allows the person to look at why something is happening in relation to their own responsibility. Therefore, the person is able to manipulate stressors with their actions. Third, challenge is based on the belief that the environment is always changing and a person can perceive a stressor as an opportunity for growth, rather than a threat to security. A combination of these characteristics make up a personality style that resists stress and is considered "hardy" (Tartasky, 1993).

The use of hardiness as personality characteristics serving as a mediator in a person's response to stress has been supported in several studies. Kobasa (1979) found hardiness to reduce illness in employees who were exposed to high levels of stress. Another study relating hardiness and nursing found that nurses who possessed the personality characteristic of hardiness had less work stress (Collins, 1996).

If nurses have the personality characteristic of hardiness, nurses may have the ability to better cope with the stressors of work and experience less burnout. It is important that

nurses and nurse administrators know that hardiness may buffer the effects of stress. It may be beneficial to nurses and nursing administration to promote and teach hardy characteristics to staff nurses as a means of retaining competent caring nurses (Collins, 1996).

If it is true that certain personality characteristics such as hardiness decrease the effects of stress, subsequently burnout, then one can seek to measure and promote hardiness among nurses (Collins, 1996). The purpose of this study is to examine the relationship between hardiness and burnout in nurses and to support recent research findings that hardiness does play a role in the burnout of nurses.

CHAPTER TWO

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

This chapter discusses a conceptual framework and a literature review to examine a relationship between hardiness and burnout in nurses. The Neuman systems model is used to provide the theoretical framework for this study (Neuman, 1995).

Conceptual Framework

Neuman's systems model will be used as a conceptual framework to understand hardiness and burnout in nurses during this study (Fawcett, 1995). The focus of the Neuman systems model is the wellness of the client or the client system in relation to environmental stress and reactions to stress (as cited in Fawcett, 1995). The model is a structure having parts and subparts that represent the interrelationship of the variables making up a person. A discussion of Neuman's systems model will be given to explain the relationships of the concepts.

The Neuman Systems Model

Neuman identifies four relevant concepts essential to her theory (Neuman, 1995). First, Neuman identifies the person. The person is defined as a client or client system (client/client system). The client/client system can be an individual, a family, a community, or social issue. Neuman describes the person as a "dynamic interrelating system containing physiologic, psychological, sociocultural, developmental, and spiritual variables." (p. 223) The client in this study is defined as the nurse.

The second concept Neuman identifies is the environment. She describes the environment as "all internal and external factors affecting the client/client system" (Neuman as cited in Fawcett, 1995, p.227). Internal factors are beliefs and attitudes contained within the client/client system. External factors are forces existing outside the client/client system. The third concept is health or wellness. Neuman describes health as

the stability of the system and it's interrelating variables: physiologic, psychological, sociocultural, developmental, and spiritual (Neuman, 1995). The amount of stability within the system predicts the amount of resistance the system will have toward a stressor. Health is the degree of system stability in which all parts of the system are in balance together and all of the needs of the client are met (Neuman, 1995). Health is maintained through a continuous flow of energy between the client /client system and the environment.

The fourth concept Neuman identified is nursing (Neuman, 1995). Nursing is viewed as "a profession concerned with all the variables effecting the client's response to stress" (Neuman as cited in Fawcett, 1995, p.231). The purpose of the nurse is to keep the client/client system stable through assessment of effects of possible stressors and assist the client to adjust and maintain optimal wellness (Fawcett, 1995).

This concept of the nurse keeping the client stable through assessing the effects of possible stressors would apply to this study if nursing colleagues were assessing each other and assisting each other to adjust to stressors. This concept of nursing is not applied in this study.

Description of Diagram

The Neuman systems model is depicted as a central core surrounded by concentric rings (Neuman, 1995). The core is made up of the basic survival factors of a person such as genetics, ego structure, strengths or weaknesses of body organs, and cognitive ability. The concentric rings surrounding the core represent three coping mechanisms the flexible line of defense, the normal line of defense, and the lines of resistance. These mechanisms represent the ability a person has to protect the core from damage due to stressors (Fawcett, 1995).

The flexible line of defense is the outer most ring representing the first protective mechanism a person uses to maintain a stable system. It is the way one quickly adjusts to everyday stressors. The flexible line of defense is thought of as an accordion-like

mechanism that is able to expand during times of stress to help the person adjust to the current stressor, thus maintaining stability.

The next concentric ring is considered the normal line of defense. This line represents "What the client has become, the state to which the client has evolved over time" (Neuman as cited in Fawcett, 1995 p.226). The stability of this line depends on one's five variables (physiological, psychological, sociocultural, developmental, and spiritual). Each variable will have varying degrees of development at a point in time. The more developed each variable is in the client/client system the more stable the normal line of defense becomes (Neuman, 1995). The normal line of defense is penetrated by stressors when the flexible line of defense cannot withstand the stressor impact. This stressor impact results in instability of the client system and the person would not be healthy according to Neuman (1995).

The innermost concentric rings are referred to as the lines of resistance. When a stressor invades the normal line of defense, the lines of resistance are involuntarily activated as the third mechanism attempting to protect the core. These lines contain internal factors that will support return to the normal line of defense. For example, the mobilization of white blood cells, or activation of the immune response in the body can be considered internal factors of the lines of resistance. If the lines of resistance are working, the system will be able to reconstitute and return to normal functioning. If the lines of resistance are ineffective, the core becomes depleted and death can occur (Fawcett, 1995). If the lines of resistance in nurses are inadequate, one's core can become depleted resulting in burnout.

Relationships Among Variables

Burnout has been defined as a "syndrome of physical, emotional and mental exhaustion, involving the development of a negative self-concept, negative job attitude and lack of concern for clients" (McElroy, 1982). Burnout is characterized as a maladaptive psychological and behavioral response to occupational stressors. Factors contributing to

burnout include low job enhancement, high work pressure and lack of supervisor support (Boyle, Grap, Younger, & Thornby, 1991). Other causes of burnout may be personal. For example, non-assertiveness in dealing with people, health difficulties, inadequate social support and family demands. Burnout is not a simple unidimensional syndrome but a complex problem with easily identified causes (Stechmiller & Yarandi, 1993).

In this study, burnout can be seen as a result of stressors that have invaded through all lines of defense according to the Neuman systems model (1995). This invasion results in the instability of the client/client system. If the system is unable to reconstitute the lines of defense, the core will become depleted and burnout will occur.

Hardiness is a set of personality characteristics that allows a person to be resistant to certain stressors (Collins, 1996). Hardiness is a combination of attitudes, beliefs, and behavioral tendencies that help a person adapt and be resistant to the reaction of the stressor. Hardiness is a personality style that may facilitate coping that leads to successful resolution of a stressful situation (Boyle et al, 1991).

According to the Neuman systems model the personality characteristic of hardiness is a part of the normal line of defense. The normal line of defense is made up of characteristics that evolve over time and allows a person to cope more effectively with stress. Hardy individuals have developed more coping resources over time and are more resistant to the effects of stress (Sortet & Banks, 1996). Hardiness can be incorporated into the normal line of defense in the Neuman system model (See Figure 1).

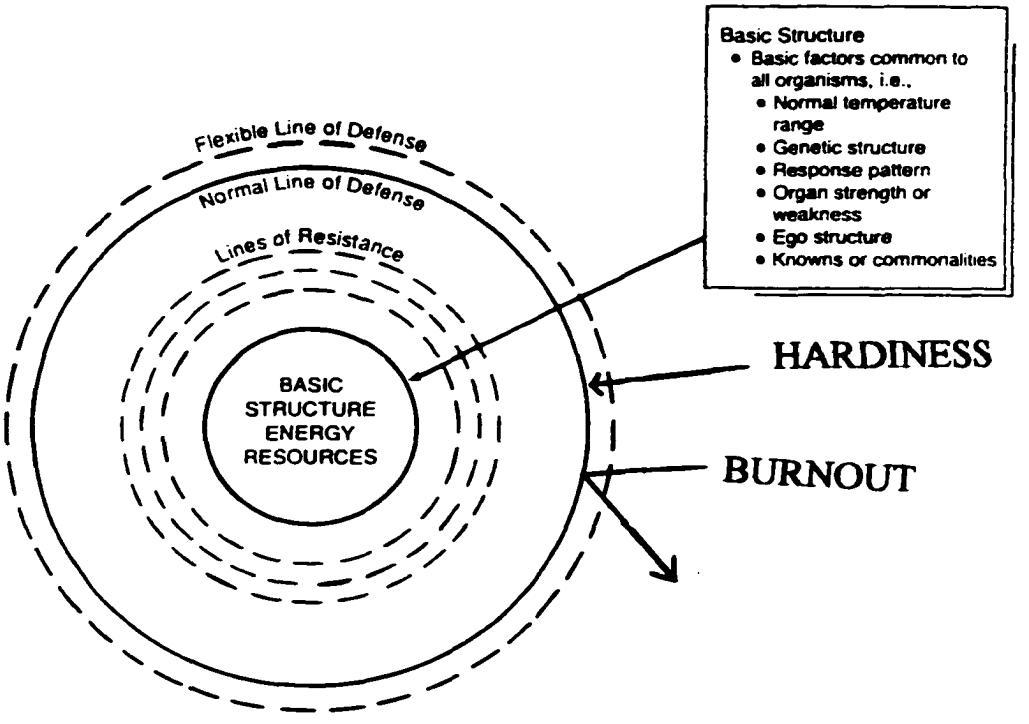

Figure: 1. The Neuman Systems Model.

From "The Neuman Systems Model", 3rd edition, by Betty Neuman, 1995

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Review of the Literature

A brief review of the literature will examine the concepts of hardiness and burnout and how these concepts relate to nursing. The literature review will also include the research questions and hypotheses for this study.

Burnout

Nursing research has focused on the relationship of work stress and burnout over the recent years. Studies have shown that nurses who experience more frequent work-related stress report a greater incidence of burnout (Stechmiller & Yarandi, 1993). Studies have focused on the causes of burnout and how to manage or buffer its' negative effects. Other factors identified include, perceived stress, coping, social support, personal health, and hardiness.

Burnout is often associated with stress in the workplace. Persons use the term burnout to mean having no energy, can no longer deal with the public appropriately, and cannot perform all of the tasks associated with their work (Layman & Guyden, 1997). Burnout is defined as a syndrome of physical, emotional and mental exhaustion, involving the development of a negative self-concept, negative job attitude and lack of concern for clients (McElroy, 1982).

Work-related stress in nurses has been examined in many studies. Oehler, Davidson, Starr and Lee (1991) examined how job stress, anxiety, and social support are related to burnout. Forty-nine neonatal nurses were surveyed using the Maslach Burnout Inventory (MBI), the State-Trait Anxiety Inventory and the Nursing Stress Scale. They found that job stress and trait anxiety were significant predictors of emotional exhaustion (51% of the total variance) which is a characteristic of burnout. This study supported the findings of Langemo (1990) who used the MBI to measure burnout and found that work stress contributed to emotional exhaustion in 287 female nurse educators (32% of the variance).

The Maslach Burnout Inventory(MBI) has been used in many studies (Ceslowitz, 1989; Hayter, 1999; McGrath, Reid & Boore, 1989; VanServellen & Leake, 1993) to

examine burnout in nurses. The MBI is designed to identify three components of burnout: emotional exhaustion, depersonalization, and low personal accomplishment (Stechmiller & Yarandi, 1993). Studies show that an increased level of burnout is often associated with job tension, lack of autonomy, and lack of time to perform duties and tasks. McGrath et al. (1989) found 46% (N=171) of nurses reported meeting deadlines imposed by others caused moderate or high levels of stress. These nurses also reported high levels of stress when experiencing too little time to perform duties to their satisfaction (67%), and rationing of scarce resources (54%). VanServellen & Leake, (1993) found job tension ($p< .001$) to be a key predictor of emotional exhaustion by surveying 237 hospital nurses. Janssen, Jonge & Bakker, (1999) found burnout was determined by work related stress (mean=3.16, SD= .48, N= 156 $p< .05$), and limited social support (mean= 3.27, SD= .31, N=156, $p< .05$). VanServellen, Topf & Leake, (1994) found that work related stress (mean=24.8, SD= 4.24, N= 236, $p< .001$) and emotional exhaustion (mean= 23.8, SD= 10.6, p, .001) are associated with poorer health in nurses. Robinson, Roth, Keim, Levenson, Flentje & Bashor, (1991) examined all three aspects of burnout in 314 nurses and found that perceptions of high work pressure, low work involvement, and supervisor support influenced burnout

Coping strategies among nurses are another predictor of burnout. Ceslowitz (1989) examined levels of burnout and ways of coping in 150 staff nurses. She found that nurses who experienced increased levels of burnout used coping mechanisms of escape/avoidance, self-controlling, and confronting ($p< .001$). Nurses who had a decreased level of burnout used problem solving, positive appraisal, and seeking social support as coping strategies ($p< .003$).

Stechmiller and Yarandi (1993) found that in addition to job stress (Beta= .000), commitment to career (Beta= -.276) , personal health (Beta= .178) and hardiness (Beta= -.114) are predictors of burnout. Critical care nurses were surveyed who worked full time. The Daily Hassles Scale, the Job Diagnostic Survey, the Psychological Hardiness Test,

and the Maslach's Burnout Inventory (MBI) were used to obtain results. They found that emotional exhaustion was affected by commitment to career, dealing with others at work, and job satisfaction. They also found that personal health, hardiness, work load satisfaction, and job security were related to burnout.

Lack of social and supervisor support is also an important variable when examining burnout in health professionals. Robinson et al. (1991) found that nurses who experienced lack of supervisor support withdrew emotionally, in order to cope within the hospital environment. This is consistent with the study conducted by Boyle, Grap, Younger and Thornby (1991), who found that social support accounted for 24% of the variance in burnout scores. Another study examining women with rheumatoid arthritis (Lambert, Lambert, Klipple & Mewshaw, 1989), showed that satisfaction with social support was a significant factor ($p < .0001$) in psychological well being.

Hayter (1999) found a strong correlation between emotional exhaustion and loss tolerance/peer relationship sub-scales of the Aides Impact Scale (mean= 3.38, SD= .67, .4082, $p < .05$), in Acquired Immune Deficiency Syndrome (AIDS) care nurses. This low mean score was matched by a low mean score on the emotional exhaustion scale (mean= 18.97, SD= 11.86), indicating a protective effect. These results also showed availability of support and supervision contributed to stress and burnout.

A lack of social support from colleagues predicted emotional exhaustion in 156 Dutch general hospital nurses (Janssen et al, 1999). Social support is often examined along with coping mechanisms when measuring levels of burnout. Increasing social support is one way managers and supervisors can buffer the effects of burnout. As previously mentioned, receiving social support from colleagues is deemed a positive coping mechanism that can decrease burnout (Ceslowitz, 1989).

Hardiness

Hardiness is another variable to assess when one is examining burnout. Research has been focused on the concept of hardiness playing a significant role in buffering the effects

of burnout in nurses (Toscano, 1998). The concept of hardiness was first examined by Kobasa (1979) who studied 161 mid-level executives who reported high levels of stress in their lives. Seventy-five of these subjects reported falling ill after the stressful event. Kobasa (1979) used the Wyler, Masuda, and Holmes Seriousness of Illness Survey, and the Holmes and Rahe schedule of recent life events to measure hardiness in these subjects. She found that those who reported high stress but did not fall ill showed to have more hardiness than the group of executives that reported high stress and became ill.

From these results, a second study was developed by Kobasa, Maddi, and Kahn (1982) examining the effects of hardiness on stress and illness in middle and upper level managers over five years. Two-hundred and fifty-nine male subjects were surveyed on a yearly basis. The study supported the findings of Kobasa's earlier study showing that hardiness had an effect on decreasing the incidence of illness during stressful life events.

Numerous studies have been developed from Kobasa's findings. Nowack (1988) developed the Cognitive Hardiness Scale to examine the effects of coping style and hardiness on physical and psychological health. Data had been collected from 194 professional employees who attended management training workshops. Nowack found that hardiness contributed significantly to psychological distress but not to physical illness.

Several methods have been developed to measure hardiness by its' sub-concepts of control, commitment and challenge. Pollock developed the Health Related Hardiness Scale in 1986, which has been used in several studies to measure hardiness as it relates to one's health (Failla, Kupa, Nick & Lee, 1996; Narsvage & Weaver, 1994; Schott-Baer, Fisher, & Gregory, 1995; and)

Narsvage and Weaver (1994) studied the relationship of physiologic status, coping, and hardiness to exercise ability and functional status. Adult patients with chronic obstructive pulmonary disease (COPD), emphysema, and chronic bronchitis were examined. They found that the commitment component of hardiness was related to both exercise ability and functional status ($r = -.23$, $p<.05$). The challenge component ($r = -.21$)

as well as the total hardiness scores were related to exercise ability (r= -.21, p<.05), but not to functional status. Therefore, the higher the hardiness level the further the subject walked. Control was not a significant variable.

The Health Related Hardiness Scale was also used in a study looking at dependent care, care giver burden, hardiness and self-care agency or ability to care for one's self (Schott-Baer et al. 1995). Fifty-three caregivers, mostly spouses, were examined. They found that as hardiness increased self-care agency also increased. Failla et al. (1996) found that only extended family relations reflected a low significant correlation (p< .05) to the sub-concepts of hardiness: commitment and challenge, in women with Systemic Lupus Erythematosus.

Psychological and spiritual well-being are factors in studying hardiness. Carson and Carson (1992) looked at spiritual well-being and hardiness in patients with Acquired Immune Deficiency Syndrome (AIDS). They found that those who were spiritually well and were able to find meaning in life were also hardier (R= .4165, p< .001). Lambert et al (1989) found that hardiness was a significant predictor (p< .0001) and explained 43.7% of the variance in measuring psychological well-being in women with rheumatoid arthritis.

Nurses have been the subjects of many studies focusing on hardiness and burnout. Langemo (1990) examined 287 nurse educators and found that higher hardiness scores (p<.001), using the Hardiness of Personality Inventory (HPI), were related to decreased work stress. Lambert and Lambert (1993) looked at nurse educators and the relationship of role conflict and ambiguity on hardiness. Hardiness was measured by the Personal Views Survey. Results show that as hardiness increased in the nurse educators, their perception of role stress decreased.

Staff nurses are often examined for burnout and hardiness due to the increased level of stress associated with their work. Studies continue to support findings that hardiness can mediate the effects of work stress and burnout (Bilisko, 1998; Boyle et al, 1991; Collins, 1996; Duquette, Kerouac, Sandhu, Ducharme & Saulinier, 1995; Simoni & Paterson,

1997; Sortet & Banks, 1996; Stechmiller & Yarandi, 1993; VanServellen, Topf & Leak, 1994;). Kobasa's study (1979) indicates that male executives that do not fall ill during times of stress have a personality considered hardy. This study suggests that hardiness as an innate trait that is developed over time as one's personality develops. Tierney and Lavelle (1997) examined the effect of teaching hardiness to newly employed hospital nurses. This study suggests hardiness may be a learned behavior versus being an innate trait. Sixty-two staff nurses were randomly assigned to three groups:

1. Group 1 received a one-day 6-hour class concerning hardiness.
2. Group 2 received a one-day 6-hour class about time management.
3. Group 3 received no intervention.

All subjects completed the third generation Personal Views Survey pre and post intervention (or no intervention). Results showed that those who took the course in hardiness immediately increased their hardiness scores (N=21, mean= 4.22, SD= 8.06, t= 2.4, p=.03). However these scores did not persist six months later (mean=1.78, SD= 7.71, t= 1.06, p=.3). Those who completed the time management course showed an immediate decrease in hardiness scores and this decrease remained the same six months later. It appears that subjects who took the time management course actually had a worsened retention in Tierney and Lavelle's study, however, not enough data existed to prove this finding. No difference was found in the group with no intervention. This study examined the possibility of teaching hardiness characteristics to a group of staff nurses. More studies are needed to examine the sustainment of hardiness.

Individual hardiness and burnout have many factors. Studies consistently show that higher levels of hardiness are associated with less burnout. The studies reviewed have shown that higher job satisfaction, less perceived stress, lower levels of emotional exhaustion, and increased social support are related to a higher level of hardiness.

Several of the studies reviewed have limitations. Many have small sample sizes and the majority of subjects are often women. Another limitation includes collecting data by

questionnaires and self-reporting. This style of data collection represents one point in time and may be influenced by the subjects feelings or mood that day. These limitations make it difficult to conclude that findings are representative of the entire population.

Hardiness Critique

A brief critique of the concept of hardiness will be discussed by reviewing how hardiness is defined and applied. Hardiness appears to have originated in the field of agriculture. It refers to the crop able to withstand adverse climatic conditions (Low, 1996). According to Kobasa (1979), hardiness is an aspect of personality which buffers the effects of stress on health. Kobasa identifies three sub-concepts of hardiness: Commitment, control, and challenge. Lee (1983, p.34) expanded this concept by including four sub-concepts of hardiness:

> "Endurance- the physiological and/or psychological toughness to continue.
>
> Strength- the ability to resist force, stress, and hardship.
>
> Boldness- the quality of being courageous, daring, adventurous.
>
> Power to control- the ability to exercise authority or influence".

Most of the studies reviewed suggest hardiness buffers the effects of stress on health. Further review reveals some conflicting findings. For example, Kobasa et al. (1985) found hardiness to be more important than social support and exercise in buffering the effects of stress on health. Lambert et al. (1990) found that satisfying support systems fosters one's ability to be hardy. Kobasa (1979) suggests hardiness is an identifiable personality style that can be developed over time in all individuals. Lee (1983) disagrees in stating hardiness is an intangible trait. Topf (1989) examined 100 critical care nurses and did not find convincing evidence that hardiness buffers the effects of burnout.

Further unanswered questions regarding the concept of hardiness include: is the ability to withstand stress an indication of a hardy personality or is the hardy personality an indicator of the ability to handle stress? Where does hardiness come from? Is it a

socialized trait, an ascribed trait, or is it a result of a strong social support system? (Lee, 1983).

For the purpose of this study, hardiness is a constellation of personality characteristics including commitment, control and challenge. These characteristics are considered innate traits that must develop as one's personality develops.

Research Questions

The research questions of this study examined the effect hardiness had on burnout by asking: 1) Is there a relationship between hardiness and burnout among nurses? 2) Is there a relationship between the socio-demographic variables and burnout? 3) Is there a relationship between socio-demographic variables and hardiness?

Hypotheses

1. Per diem nurses will have more hardiness than full-time staff nurses.
2. Per diem nurses will have less burnout than full-time staff nurses.

Definition of Terms

Burnout is defined as a "maladaptive psycho-physiological and behavioral response to occupational stressors" (Boyle, et al. 1991, p. 850). Burnout is characterized by emotional exhaustion, depersonalization, and low personal accomplishment (Stechmiller & Yarandi, 1993).

Hardiness is defined as " a constellation of personality characteristics that function as a resistance resource in the encounter with stressful life events" (Tartasky, 1993, p. 225). Hardiness is characterized by one's commitment, control, and challenge. Commitment is defined as a sense of motivation and active involvement in work and goal-setting that provides a sense of purpose in one's life (Huang, 1995). Control is defined as the individual's perception that one can influence and modify one's stressful life events. Challenge is defined as the positive attitude toward change and is seen by the "hardy" individual as an opportunity for growth.

A full-time staff nurse is defined as a registered nurse who has been employed at least three months and works a minimum of 36 hours per week in a hospital.

A per diem nurse is a registered nurse who has been employed by a hospital and is able to chose his or her working schedule. Per diem nurses do not receive health care benefits from their employers and are not eligible to accrue vacation time. Instead, per diem nurses are able to chose when they want to work and are paid more per hour than full-time staff nurses.

For the purpose of this study, per diem nurses must be employed for at least three months and choose to work a minimum of 16 hours per week at one or more hospitals. In some institutions per diem nurses are also referred to as Resource Nurses.

Table 1. Studies Examining Burnout

Study Authors	Sample size	Relationships Among Variables	Probability	Statistical Values
1. Oelhler, Davidson, Starr & Lee (1991)	N=49	Job stress and trait anxiety were significant predictors of EE	Job stress <.001 Trait anxiety <.001	F = 4.06 F =3.99
2. Langemo (1990)	N= 287	Work stress contributed to EE	<.001	F= 7.39
3. Vanservellen & Leake (1993)	N= 237	Job tension was positively related to EE	<.001	r= 0.5
4. Robinson, Roth, Keim, Levenson, Flentje & Bashor (1991)	N= 314	Negative relationships between low work involvement and supervisor support with EE. Positive relationship between work pressure and EE	<.001 <.05 <.01	F(1,261)= 41.23 F(1,260)= 6.92 F(1,262)= 74.06

For the definition of F value, refer to: Polit & Hungler, (1995). Nursing Research principles and methods (5thed.). Philadelphia: Lippincott Co.
EE= emotional Exhaustion
***= not reported

Table 2. Studies Examining Hardiness

Study Authors	Sample Size	Relationship Among Variables	Probability	Statistical Values
1. Nowack (1988)	N=194	Hardiness contributed to psychological stress	<.01	F= 86.6
2. Sortet & Banks (1996)	N=126	Hardiness was found to be key predictor of burnout	<.001	--
3. Boyle, Grap, Younger & Thornby (1991)	N=103	Personality hardiness negatively related to burnout.	a. <.001 b.< .01 c. <.001	a. r= -.47 b. r= -.23 c. r= -.33
4. Simoni & Paterson (1997)	N= 440	Greater hardiness associated with lower burnout	<.001	F= 36.2
5. VanServellen, Topf & Leake (1994)	N= 237	Total hardiness yielded significant inverse relationship with EE	<.01	r= -.29
6. Bilisko (1998)	N= 237	Inverse relationship between hardiness and burnout	<.001	F= -9.8
7. Collins (1996)	N= 113	Higher levels of hardiness associated with less burnout	<.01	r= -.39

For the definition of F value, refer to: Polit & Hungler, (1995). Nursing research principles and methods (5th ed.). Philadelphia: Lippincott Co.
EE= Emotional exhaustion
a= Commitment
b= Challenge
c= control
--= not reported

CHAPTER THREE

METHODOLOGY

Design

This study was a replication of a study conducted by Cindy Bilisko (1998). Bilisko examined the relationship between hardiness and burnout in critical care nurses using the Cognitive Hardiness Scale, the Staff Burnout Scale for Health Professionals and a socio-demographic questionnaire. Results supported Bilisko's hypothesis, showing a negative correlation between hardiness and burnout. Replicating a previous study was chosen to further investigate the relationship of hardiness and burnout in nurses.

A descriptive design was used in this study to examine the relationship between the variables of hardiness and burnout without any intervention by the researcher. The purpose of this design was to examine a relationship between variables, rather than inferring a cause and effect relationship (Polit & Hungler, 1995, p. 178). Threats to internal validity of this study included extraneous variables such as age, gender, years of education, years of experience, marital status, outside stressors, social support and spiritual well-being. These variables could have affected a person's perception of hardiness or burnout. Age, gender, ethnic background, hours worked per day, sick days taken, years of education, years of experience, and marital status were examined to find any differences among the groups related to hardiness and burnout.

Threats to external validity involved the sampling method, the setting of the study, and the possibility of subjects answering questions differently because they knew they were part of a research project.

A convenient sample of full-time staff nurses and per diem nurses were used in this study. No randomization was used in the sample selection, therefore, one cannot assume the groups are equivalent. The setting of the study was controlled by conducting the

research at two different sites. The possibility of subjects answering differently because they knew they were in a study was not controlled.

Sample and Setting

Subjects

Subjects were recruited using a convenient sample of nurses at two local hospitals. Questionnaires were given to 150 eligible nurses at staff meetings attended by the researcher. Seventy-five completed questionnaires were returned with a response rate of 50 %. Of the 75 subjects, 42 were considered full-time staff nurses and 34 were per diem nurses. One subject was considered both a full-time staff nurse and a per diem nurse and worked 50 hours per week.

The majority of subjects were Caucasian (98.7%) female (93.3%) and married (62.7%) with a mean age of 34.89 years (SD 8.99, range of 23 to 59). As depicted in table 3, years of experience as an RN ranged from less than one to 28 with a mean of 10.03 (SD 7.84) . Years as a full-time staff nurse ranged from 0 to 28 with a mean of 6.66. Years as a per diem nurse ranged from 0 to 17, with a mean of 1.99. Table 4 shows the level of education. One respondent marked "other" for highest earned degree and specified a bachelor's of health science degree.

The two hospitals were not identified by the questionnaire nor were specific units. The number of hours worked in one week ranged from 16 to 50 with a mean of 31.08 (SD= 7.84). Per Diem nurses were required to work a minimum of 16 hours per week to qualify for the study. Hours worked per day ranged from 6 to 12 with a mean of 10.12 (SD= 2.01). The number of sick days taken ranged from 0 to 10 with a mean of 1.88 (SD= 2.16).

Instruments

Instruments used in this study include the Cognitive Hardiness Scale (Nowack, 1996), the Staff Burnout Scale for Health Professionals (Jones, 1980) and a socio-demographic questionnaire (See Appendix B, C & D). Approval was sought for the use of the

Cognitive Hardiness Scale and the Staff Burnout Scale for Health Professionals (See Appendix B & C) The socio-demographic questionnaire was developed by the researcher.

Table 3.

Experience

Category	Mean	Standard Deviation	Range
Years as RN	10.03	7.84	<1 to28
Years full-time	6.66	7.02	0 to 28
Years Per Diem	1.99	3.33	0 to 17

Table 4.

Education Level

Highest Earned Degree	Frequency	Percent
ADN	26	34.7
Diploma	6	8
BSN	40	53.3
MSN	2	2.7
Other	1	1.3

Cognitive Hardiness Scale (CHS)

The Cognitive Hardiness Scale was developed by Nowack (1989). This scale focuses on positive aspects of hardiness. The Cognitive Hardiness Scale (CHS) is a 30-item scale that measures the attitudes and beliefs about work and life. Commitment was measured by involvement in life rather than being alienated from life events. Challenge was measured as attitudes that view life changes as challenges as opposed to threats. Control was measured

as a belief that one has a sense of control over significant outcomes in life. The CHS asked the subject how strongly they agreed or disagreed with statements about their beliefs. The scale has thirty statements to be rated on a 5-point scale ranging from 1: "strongly agree" to 5: "strongly disagree". Questions numbered 1-5, 13, 14, 16, 18, 19, 22, and 30 were inversely scored. Subjects who disagreed with a negatively stated question obtained a higher score. Total scores may range from 30-150. Higher scores indicate a greater level of hardiness.

The CHS has high internal consistency reliability (alpha) .83 (Nowack, 1989). This 30-item scale (M= 106.21, S.D.= 12.97) has shown adequate internal consistency reliability (alpha) of .84.This scale is a unidemensional factor structure, and has demonstrated criterion related validity with both subjective and objective health outcomes in previous studies (Nowack, 1989). More recent evidence has shown an alpha of .84 (Rutlin, 1996).

The Staff Burnout Scale for Health Professionals (SBS-HP)

The Staff Burnout Scale for Health Professionals (SBS-HP) was developed by Jones (1980) to measure burnout specifically in health professionals. This scale measures four dimensions of burnout: the cognitive, psychophysiological, behavioral, and affective. The SBS-HP is a 30-item Likert-type scale with 20 items measuring burnout and the remaining 10 items constituting what Jones refers to as the "lie" scale. These 10 items making up the "lie" scale will examine how truthfully the subject will respond to questions by comparing their answers to other similar questions. The 30 items will be numerically scored with 1 = "disagree very much" to 7 = " agree very much". Scores may range from 20 (no sign of burnout) to 140 (severe signs of burnout).

Jones (1980) obtained a Spearman-Brown split-half reliability coefficient of 0.93 for internal consistency. In a study by Duquette et al. (1995) the pre-test for the French translation showed Cronbach's alpha to be .93 (n=243). In the actual study, Cronbach's alpha was .83 (n=1545). Alpha coefficients for the sub-scales were: .73 (cognitive), .59

(behavioral), .50 (affective), and .44 (psycho-physiologic). Internal consistency for the SBS-HP was reported by Boyle et al. (1991) to be .82. Validity was addressed in studies of criterion-related validity in which burnout was correlated with job turnover, absenteeism, tardiness, discipline and alcohol use (Jones, 1980).

Socio-Demographic Questionnaire

The socio-demographic questionnaire was developed by the researcher to measure specific variables. These variables included: age, gender, marital status, ethnic background, years of experience as a nurse, years as a full-time staff nurse, years as a per diem nurse, highest earned degree, and number of sick days.

Procedure

Prior to proceeding with this study, approval was sought from the Grand Valley State University Human Subjects Review Committee (See Appendix H) and the Human Subjects Review Board at two area hospitals (See Appendix I & J). Data was collected by distributing questionnaires to nurses at various unit staff meetings. The researcher attended convenient staff meetings and presented the thesis topic by reviewing what is already stated in the cover letter (See Appendix E). Criteria needed for participation was discussed. Those nurses who met the criteria described and were willing to participate in the study received a packet. Each packet included a cover letter with instructions and the questionnaire. Participants had the option to complete the questionnaire at that time and hand it back to the researcher, or they could take the questionnaire home and return it by mail. Those who chose to complete the questionnaire at home received a self-addressed stamped envelope. Participants were instructed not to write their names anywhere on the packet and to place the completed questionnaire in a blank envelope passed around the room by the researcher. These procedures ensured anonymity for the subjects involved. Hospital units included in the data collection were: Medical/Surgical units, Orthopedic/Neurology units, Telemetry units, Labor and Delivery, Pediatrics, Endoscopy, Critical Care, and Intermediate units. Specific units were not identified by the

questionnaire nor were individual institutions. Therefore, no specific data could be associated with a particular population. There was a minimal psychological risk: the questionnaire may have stimulated feelings of stress that were not previously considered. Subjects had the option of being omitted from the study by placing their blank questionnaire in the envelope when it was passed around the room during the staff meeting. Data was collected no later than June 30, 2000. Nurses had to attend the staff meeting to participate in the study.

CHAPTER FOUR

DATA ANALYSIS

The independent variable in this study is hardiness which was measured by the Cognitive Hardiness Scale (CHS). The dependent variable is burnout and was measured by the Staff Burnout Scale for Health Professionals (SBS-HP). Both scales used in this study gave a total score. The level of measurement for the variables: hardiness and burnout was ordinal. Pearson's r correlation was used to assess the relationship between hardiness and burnout. T-tests were used to compare the differences between hardiness and burnout in the two groups of nurses: full-time staff nurses and per diem nurses.

Data Analysis Findings

For the purpose of this study, reliability analysis was computed for the CHS and the SBS-HP. The CHS had a coefficient alpha of .81. The SBS-HP had a coefficient alpha of .88. According to Polit and Hungler (1995, p. 352), these reliability coefficients indicated adequate internal consistency for both the CHS and the SBS-HP. Previous studies demonstrated similar reliability coefficients. Nowack (1989) found an internal consistency reliability of .83 and Rutlin (1996) demonstrated a coefficient alpha of .84.

The scores of the CHS ranged from 85 to 137 with a mean of 109.45 (SD= 10.67). Possible scores ranged from 30 (not hardy) to 150 (very hardy). The scores for the SBS-HP ranged from 59 to 134 with a mean of 106.79 (SD= 17.85). Possible scores for the SBS-HP ranged from 20 (no burnout) to 140 (severe burnout).

Pearson's r coefficient was used to answer the research questions: 1) Is there a relationship between hardiness and burnout among nurses? 2) Is there a relationship between the socio-demographic variables and burnout? 3) Is there a relationship between the socio-demographic variables and hardiness? Statistical analysis showed a moderately strong, direct relationship, found to be statistically significant between hardiness and burnout among nurses ($r = .557$; $p = .000$). Further analysis using Pearson's r assessed the

relationship of interval variables including: age, years as a full-time staff nurse, years as a per diem nurse, hours worked per week, hours worked per day and sick days, with hardiness and burnout. No significant differences were found between any of these variables and hardiness or burnout. Further t-tests were used to analyze any differences between the two groups of nurses and age, years as an RN and sick days taken. No significant differences were found between these variables and the two groups of nurses. Education between the two groups was analyzed using Pearson's chi-squared and showed no relationship between full-time staff nurses and per diem nurses. No significant differences were found between the variables of gender, ethnic background, and marital status between the two groups.

Further analysis was used to test the hypotheses: 1) Per diem nurses will have more hardiness than full-time staff nurses. 2) Per diem nurses will have less burnout than full-time staff nurses. Using t-tests, no significant differences were found between hardiness and burnout in full-time staff nurses. Also, no significant differences were found between hardiness and burnout in per diem nurses (See Table 5). These results do not support the hypotheses that per diem nurses will have more hardiness than full-time staff nurses or, that per diem nurses will have less burnout than full-time staff nurses.

Table 5.

Comparison of Hardiness and Burnout in Full-time Staff Nurses and Per Diem Nurses

Variables	Mean	SD	t (df)	p =
Hardiness				
Staff Nurses	109.41	11.58	.034 (73)	0.973
Per Diem	109.5	9.62		
Burnout				
Staff Nurses	106.45	18.54	.180 (71)	0.857
Per Diem	107.21	17.24		

CHAPTER FIVE

DISCUSSION AND IMPLICATIONS

Discussion

This research study did not support the hypotheses: 1) per diem nurses will have more hardiness than full-time staff nurses, 2) Per diem nurses will have less burnout than full-time staff nurses. Results showed that hardiness was directly related to burnout among total nurses and no differences were found between full-time staff nurses and per diem nurses. According to this study, the hardier nurse will experience higher levels of burnout. These findings are inconsistent with the findings of previous studies. An inverse relationship between hardiness and burnout in nurses was found by Collins (1996), Simoni and Paterson (1997), Sortet and Banks (1996), Boyle et al, (1991), and VanServellen et al, (1994).

This study also found no relationship between the variables of age, years of experience, marital status, hours worked, number of sick days, and education with hardiness or burnout. These findings are inconsistent with some previous research. Sortet and Banks (1996) found age ($r = -.27$; $p = .002$), and years of experience ($r = -.30$; $p = .000$) to be inversely related to emotional exhaustion leading to burnout in nurses. Duquette et al. (1995) found significant differences between age ($p < .05$) and gender ($p < .05$) and hardiness in 1,545 geriatric nurses, however, found no significant difference between years of experience and hardiness. No significant differences were found between the variables of age, gender, or years of experience and burnout by Duquette et al (1995).

Other differences noted in several studies found a relationship between full-time nurses and part-time nurses. Sortet and Banks (1996) found that full-time employment versus part-time employment did not relate to burnout. Most studies did not report relationships between socio-demographic variables and the independent and dependent variables.

Theoretical Framework Findings

The Neuman systems model (Neuman, 1995) is useful in describing how hardiness and burnout could be related to each other. This study does not support the theoretical framework and conceptualization of hardiness and burnout. Further examination of the Neuman systems model will provide a possible theoretical explanation for the direct relationship between hardiness and burnout.

Neuman (1995) gives particular attention to wellness retention and wellness attainment of the client/client system. According to Neuman (as cited in Fawcett, 1995), "Provided support factors are in place, the client, as a system, constantly monitors self by making adjustments as needed to retain, attain, and maintain stability for an optimal health state"(p.220). Neuman describes optimal client/client system health on a continuum that is constantly changing. Health is also dependent on the degree of development of the five variables making up the system: physiological, psychological, sociocultural, developmental and spiritual. These variables were not measured in this study. It is unknown to what degree the five variables were developed in these subjects. Therefore, it cannot be determined what degree of burnout one is enduring. One explanation for the direct relationship between hardiness and burnout may be that nurses have developed coping mechanisms that are considered hardy and are still suffering, to a certain degree, from the effects of burnout. This degree of burnout may cause a variance from "optimal wellness" according to Neuman's model (1995). This variance fluctuates on a continuum much like the flexible line of defense (See Figure 1) and was not adequately represented in the statistical data. One way to measure the effects of hardiness and burnout and thus measure the variance from optimal wellness would be to measure these variables over a period of time instead of at one point in time.

Nurses in general may have developed more coping mechanisms due to the high degree of commitment and personal involvement the profession of nursing requires. These coping mechanisms are measured as high levels of hardiness per the CHS. Perhaps only the

hardiest nurses are remaining in the profession due to their ability to endure high levels of burnout.

Limitations

Limitations to this study include the nonrandom sampling method. A convenient sample limits the generalization of the results. Extraneous variables such as social support, manager supervision, outside stressors, coping strategies, spiritual well being, and level of anxiety were not measured. These variables may have effects on one's characteristics of hardiness and interpretation of burnout. Methodology may have influenced the subjects answers, by having the researcher in the room while subjects filled out questionnaires. The small number of male subjects in the study will also limit the generalization of the findings. Other limitations include data collection from one geographical location that may not be representative of all nurses. Also, hardiness and burnout were measured at one point in time. Results may have been different if data was collected during a different time frame. All of the limitations mentioned could limit the generalization of the findings and may have an unknown influence on results.

Implications

Hardiness was not found to have a buffering effect against burnout in this study. Therefore, nurses and nurse managers need to be aware that burnout may still exist in those individuals who have a "hardy" personality. The potential value of hardiness to the nursing profession is the development and use of interventions based on hardiness research. Results of this study provide the bases for further investigation of the definition of hardiness and burnout and their possible interpretations. Further conceptual development of hardiness is needed for nursing interventions to be based on the level of one's hardiness. In addition to Kobasa's (1979) conceptualization of hardiness being defined as commitment, control and challenge, Lee (1983) described hardiness as endurance, strength, boldness, and control. Holahan and Moos (as cited in Jennings & Staggers, 1994) noted a strong similarity between self-confidence and hardiness.

Similarities have been noted between hardiness and adequacy (Magnani, (1990), as cited in Jennings & Staggers, 1994), and authenticity (Lambert & Lambert, 1987). This wide range of definitions can make it difficult to sort out exactly what the researcher means when using the concept of hardiness. This also makes hardiness difficult to measure. Most instruments, such as the CHS (Nowack, 1988) use a Lickert scale to measure hardiness. These types of scales were considered "structured questions" by Low (1999, p.21) and were questionable whether theses types of scales indicated the level of personal hardiness. Low (1999) suggests utilizing a qualitative approach to measure hardiness and allow the subjects to explain what they mean or in what specific context hardiness is applied in their lives. Lambert and Lambert (1999) suggested a qualitative longitudinal study to examine hardiness. This type of study would examine hardiness over a continuum and would assess the longitudinal stability of hardiness in individuals.

Although previous studies show an inverse relationship between hardiness and burnout, critical analysis of the concept of hardiness continues and must be considered. As the researcher, there is a strong motivation to understand how people are able to function and cope in the presence of stress. Why are some able to escape the effects of stress and others are not? Future research is needed to develop the concept and a universal definition of hardiness. Hardiness may play a role in future interventions to help patients and nurses cope with the effects of stress leading to burnout.

LIST OF REFERENCES

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Bilisko, C. (1998). Is there a Link Between Hardiness and Burnout in Critical Care Nurses? Unpublished Master's Thesis, Grand Valley State University, Allendale.

Boyle, A., Grap, M. J., Younger, J., & Thornby, D. (1991). Personality hardiness, ways of coping, social support and burnout in critical care nurses. Journal of Advanced Nursing, 16, 850-857.

Carson, V. B., & Green, H. G. (1992). Spiritual well-being: A predictor of hardiness in patients with acquired immunodeficiency syndrome. Journal of professional nursing, 8(4), 209-220.

Ceslowitz, S.B. (1989). Burnout and coping among hospital staff nurses. Journal of Advanced Nursing, 14, 553-557.

Collins, M.A. (1996). The relationship of work stress, hardiness, and burnout among full-time hospital staff nurses. Journal of Nursing Staff Development, 12(2), 81-85.

Drucker, P. (1991). The new productivity challenge. Harvard Business Review, 69-79.

Duquette, A., Kerouac, S., Sandhu, B. K., Ducharme, F., & Saulnier, P. (1995). Psychosocial determinants of burnout in geriatric nursing. International Journal of Nursing Studies, 32(5), 443-456.

Failla, S., Kuper, B. C., Nick, T., & Lee, F. A. (1996). Adjustment of women with systemic lupus erythematosus. Applied nursing research, 9(2), 87-96.

Fawcett, J. (1995). Analysis and evaluation of conceptual models in nursing (3rd ed. pp. 217-275). Philadelphia: Davis.

Hayter, M. (1999). Burnout and aids care-related factors in HIV community Clinical nurse specialists in the north of England. Journal of Advanced Nursing, 29(4), 984-993.

Huang, C. (1995). Hardiness and stress: A critical review. Maternal-Child Nursing Journal, 23(3), 82-88.

Janssen, P. P. M., Jonge, J., & Bakker, A. B. (1999). Specific determinants of intrinsic work motivation, burnout and turnover intentions: A study among nurses. Journal of Advanced Nursing, 29(6), 1360-1369.

Jennings, D., & Staggers, N. (1994). A critical analysis of hardiness. Nursing Research, 43(5), 274-281.

Jones, J. W.(1980). The Staff Burnout Scale for Health Professionals. Park Ridge, Illinois: London House Inc.

Kobasa, S. C. (1979). Stressful life events, personality, and health : An inquiry into hardiness. Journal of Personality and Social Psychology, 37(1), 1-11.

Kobasa, S. C., Maddi, S. R., & Khan, S. (1982). Hardiness and Health: A prospective study. Journal of Personality and Social Psychology, 42(1), 168-177.

Kobasa, S. C., Maddi, S. R., Puccetti, M. C., & Zola, M. (1985). Effectiveness of hardiness, exercise and social support as resources against illness. Journal of Psychosomatic Research 29(5), 525-533.

Lambert, V. A., & Lambert, C. E. (1999). Psychological hardiness: State of the science. Holistic Nursing Practice, 13(3), 11-19.

Lambert, C., & Lambert, V. A. (1993). Relationships among faculty practice involvement, perception of role stress, and psychological hardiness of nurse educators. Journal of Nursing Education 32(4), 171-179.

Lambert, V. A., & Lambert, C. E. (1987). Hardiness: its development and relevance to nursing. Image, 19(2), 92-95.

Lambert, V. A., Lambert, C. E., Klipple, G. L., & Mewshaw, E. A. (1989). Social support, hardiness and psychological well-being in women with arthritis. IMAGE: Journal of Nursing Scholarship, 21(3), 128-132.

Layman, E., & Guyden, J. A. (1997). Reducing your burnout. The health care manager, 15(3), 57-69.

Lee, H. (1983). Analysis of a concept: Hardiness. Oncology Nursing Forum 10(4), 32-35.

Lengemo, D. K. (1990). Impact of work stress on female nurse educators. IMAGE: Journal of Nursing Scholarship, 22(3), 159-163.

Low, J. (1999). The concept of hardiness: Persistent problems, persistent appeal. Holistic Nursing Practice, 13(3), 20-24.

Low, J. (1996). The concept of hardiness: a brief but critical commentary. Journal of Advanced Nursing, 24, 588-590.

McElroy, A. M. (1982). Burnout: A review of the literature with application to cancer nursing. Cancer Nursing, 5, 211-217.

McGrath, A., Reid, N., & Boore, J. (1989). Occupational stress in nursing. International Journal of Nursing Studies, 26(4), 343-358.

Narvsage, G. L., & Weaver, T. E. (1994). Physiologic status, coping, and hardiness as predictors of outcomes in chronic obstructive pulmonary disease. Nursing Research, 43(2), 90-95.

Neuman, B. (1995). The Neuman Systems Model. (3rd ed.). Connecticut: Appleton & Lange.

Nowack, K. (1988). Coping style, cognitive hardiness, and health status. Journal of Behavioral Medicine, 12(2), 145-158.

Oehler, J. M., Davidson, M. G., Starr, L. E., & Lee, D. A. (1991). Burnout, job stress, anxiety, and perceived social support in neonatal nurses. Heart & Lung, 20(5), 500-505.

Polit, D. F., & Hungler, B. (1995). Nursing Research principles and methods (5th ed.). Philadelphia: Lippincott Co.

Pollock, S. E., Christian, B. J., & Sands, D. (1990). Responses to chronic illness: analysis of psychological and physiological adaptation. Nursing Research 39(5), 300-304.

Robinson, S. E., Roth, S. L., Keim, J., Levenson, M., Flentje, J. R., & Bashor, K. (1991). Nurse burnout: Work related and demographic factors as culprits. Research in Nursing and Health, 14, 223-228.

Rutlin, E. C. (1996). Relationships among role strain, hardiness, and academic achievement. Unpublished master's thesis, Grand Valley State University, Allendale.

Schott-Baer, D., Fisher, L., & Gregory, C. (1994). Dependent care, caregiver burden, hardiness and self care agency of caregivers. Cancer Nursing, 18(4), 299-305.

Simoni, P. S., & Paterson, J. J., (1997). Hardiness, coping, and burnout in the nursing workplace. Journal of Professional Nursing 13(3), 178-185.

Sortet, J. P., & Banks, S. R. (1996). Hardiness, job stress, and health in nurses. Hospital Topics, 74(2), 28-32.

Stechmiller, J. K., & Yarandi, H. N. (1993). Predictors of burnout in critical care nurses. Heart & Lung, 22(6), 534-541.

Tartasky, D.S. (1993). Hardiness: conceptual and methodological issues. IMAGE: Journal of Nursing Scholarship, 25(3), 225-228.

Tierney, M.J. & Lavelle, M. (1997). An Investigation into modification of personality hardiness in staff nurses. Journal of Nursing Staff Development, 13(4), 212-217.

Topf, M. (1989). Personality hardiness, occupational stress, and burnout in critical care nurses. Research in Nursing and Health 12, 179-186.

Van Servellen, G., & Leake, B. (1993). Burn-out in hospital nurses: A comparison of acquired immunodeficiency syndrome, oncology, general medical, and intensive care unit nurse samples. Journal of Professional Nursing, 9(3), 169-177.

Van Servellen, G., Topf, M., & Leake, B. (1994). Personality hardiness, work-related stress, and health in hospital nurses. Hospital Topics, 72(2), 34-39.

APPENDIX A

Permission to Use Figure 1

February 14, 2000

Dr. Betty Neuman
P.O. Box 77
Watertown, OH 45787

Dear Dr. Neuman,

I am a master's student in Nursing at Grand Valley State University in Grand Rapids Michigan. I am currently working on my master's thesis. My thesis will examine if a relationship exists between the concepts of hardiness and burnout in nursing. I am using the Neuman Systems Model as the theoretical framework to help explain the concepts in my study.

After speaking with you on the phone, I am writing to you to obtain permission to use a diagram from your book entitled "The Neuman Systems Model" (3rd edition, published in 1995). With your permission I would like to copy figure1-4 (Client/client system) and add the words hardiness and burnout with an arrow from each word indicating where these concepts fit into the diagram. I will include this diagram in my finished thesis.

I have enclosed a copy of the abstract to my thesis. I will also send you a copy of my thesis when it is completed. Thank you.

Sincerely,

[redacted]

Carrie Hansen
1117 Fifth St.
Grand Rapids, MI 49504
616-774-3284
carrie.hansen@gte.net

The above request is granted 2/24/00

[redacted]

APPENDIX B

The Cognitive Hardiness Scale

Below is a list of common beliefs people hold. How strongly do you agree or disagree with each statement?

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1. My involvement in non-work activities and hobbies provides me with a sense of meaning and purpose.	1	2	3	4	5
2. By taking an active part in political and social affairs, people can strongly influence world events and politics.	1	2	3	4	5
3. When all else appears bleak, I can always turn to my family and friends for help and support.	1	2	3	4	5
4. I prefer to do things that are risky, exciting, and adventuresome rather than adhere to the same comfortable routine and lifestyle.	1	2	3	4	5
5. Becoming a success is mostly a matter of working hard; luck plays little or no role.	1	2	3	4	5
6. There are relatively few areas about myself in which I feel insecure, highly self-conscious, or lacking in confidence.	1	2	3	4	5
7. In general, I tend to be a bit critical, pessimistic, and cynical about most things in work and life.	1	2	3	4	5
8. It would take very little change in my present circumstances at work to cause me to leave my present organization.	1	2	3	4	5
9. I do not feel satisfied with my current involvement in the day-to-day activities and well-being of my family and friends.	1	2	3	4	5
10. In general, I would prefer to have things well planned out in advance rather than deal with the unknown	1	2	3	4	5

APPENDIX B

The Cognitive Hardiness Scale

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
11. Most of life is wasted in meaningless activity.	1	2	3	4	5
12. I often feel awkward, uncomfortable, or insecure interacting with others socially.	1	2	3	4	5
13. I rarely find myself saying out loud or thinking that I'm not good enough or capable of accomplishing something.	1	2	3	4	5
14. I am committed to my job and work activities that I am currently pursuing.	1	2	3	4	5
15. I tend to view most work and life changes, disappointments, and setbacks as threatening, harmful, or stressful rather than challenging.	1	2	3	4	5
16. Just for variety's sake, I often explore new and different routes to places that I travel to regularly (e.g., home, work).	1	2	3	4	5
17. Others will act according to their own self-interests no matter what I attempt to say or do to influence them.	1	2	3	4	5
18. If I get a chance to see how others have done something or get the opportunity to be taught what to do, I am confident that I can be successful at most anything.	1	2	3	4	5
19. I expect some things to go wrong now and then, but there is little doubt in my mind that I can effectively cope with just about anything that comes my way.	1	2	3	4	5
20. Overall, most of the things that I am involved in (e.g., work, community, social relationships) are not very stimulating, enjoyable, & rewarding.	1	2	3	4	5

APPENDIX B

The Cognitive Hardiness Scale

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
21. I am likely to get frustrated and upset if my plans do not unfold as I hoped, or if things do not happen the way I really want them to.	1	2	3	4	5
22. There is a direct relationship between how hard I work and the success and respect the I will have.	1	2	3	4	5
23. I don't feel that I have accomplished much lately that is really important or meaningful with respect to my future goals and objectives in life.	1	2	3	4	5
24. I often think that I am inadequate, incompetent, or less important than others with whom I work and that I know.	1	2	3	4	5
25. Many times I feel that I have little or no control and influence over things that happen to me.	1	2	3	4	5
26. If anything else changes or goes wrong in my life right now, I feel that I might not be able to effectively cope with it.	1	2	3	4	5
27. When change occurs at work or home I often find myself thinking that the worst is going to happen.	1	2	3	4	5
28. At the moment, things at work and at home are fairly predictable and any more changes would just be too much to handle.	1	2	3	4	5
29. You can't really trust that many people because most individuals are looking for ways to improve their welfare and happiness at your expense.	1	2	3	4	5
30. Most of the meaning in life comes from internal, rather than external, definitions of success, achievement, and self-satisfaction.	1	2	3	4	5

APPENDIX C

Staff Burnout Scale For Health Professionals

For each statement check the one answer which best reflects how much you agree or disagree with each statement. Answer according to how you currently feel in each case.	Agree Very Much	Agree Pretty Much	Agree a Little	Disagree a Little	Disagree Pretty Much	Disagree Very Much
1. I feel fatigued during the workday.	☐	☐	☐	☐	☐	☐
2. Lately, I have missed work due to either colds, the flu, fever, or other illnesses.	☐	☐	☐	☐	☐	☐
3. Once in a while I lose my temper and get angry on the job.	☐	☐	☐	☐	☐	☐
4. All my work habits are good and desirable ones.	☐	☐	☐	☐	☐	☐
5. I experience headaches while on the job.	☐	☐	☐	☐	☐	☐
6. After work I often feel like relaxing with a drink of alcohol.	☐	☐	☐	☐	☐	☐
7. I never gossip about other people at work.	☐	☐	☐	☐	☐	☐
8. I feel that the pressures of work have contributed to marital and family difficulties in my life.	☐	☐	☐	☐	☐	☐
9. I am never late for an appointment.	☐	☐	☐	☐	☐	☐
10. I often have the desire to take medication (e.g., tranquilizers) to calm down while at work.	☐	☐	☐	☐	☐	☐
11. I have lost interest in my patients and I have a tendency to treat these people in a detached, almost mechanical fashion.	☐	☐	☐	☐	☐	☐
12. At work I occasionally think of things that I would not want other people to know about.	☐	☐	☐	☐	☐	☐
13. I often feel discouraged at work and often I think about quitting.	☐	☐	☐	☐	☐	☐
14. I frequently get angry at and irritated with patients.	☐	☐	☐	☐	☐	☐
15. I am sometimes irritable at work.	☐	☐	☐	☐	☐	☐
16. I have trouble getting along with my fellow employees.	☐	☐	☐	☐	☐	☐
17. I am very concerned with my own comfort and welfare at work.	☐	☐	☐	☐	☐	☐
18. I try to avoid my supervisor(s).	☐	☐	☐	☐	☐	☐
19. I truly like all my fellow employees.	☐	☐	☐	☐	☐	☐
20. I always do what is expected of me at work, no matter how inconvenient it might be to do so.	☐	☐	☐	☐	☐	☐
21. I am having some work performance problems lately due to uncooperative patients.	☐	☐	☐	☐	☐	☐
22. All the rules and regulations at work keep me from optimally performing my job duties.	☐	☐	☐	☐	☐	☐
23. Sometimes at work I put off until tomorrow what I ought to do today.	☐	☐	☐	☐	☐	☐
24. I do not always tell the truth to my supervisor or co-workers.	☐	☐	☐	☐	☐	☐
25. I find my work environment depressing.	☐	☐	☐	☐	☐	☐
26. I feel uncreative and understimulated at work.	☐	☐	☐	☐	☐	☐
27. I often think about finding a new job.	☐	☐	☐	☐	☐	☐
28. Worrying about my job has been interfering with my sleep.	☐	☐	☐	☐	☐	☐
29. I feel there is little room for advancement at my place of employment.	☐	☐	☐	☐	☐	☐
30. I avoid patient interaction when I go to work.	☐	☐	☐	☐	☐	☐

APPENDIX D

Socio-Demographic Questionnaire

1. What is your age? _____

2. What is your gender?
   (1) Male _____
   (2) Female _____

3. What is your marital status?
   (1) Never married _____
   (2) Married _____
   (3) Divorced _____
   (4) Widowed _____

4. Are you considered a full-time staff nurse? _____

5. Are you considered a Per Diem/Resource nurse? _____

6. How many hours do you work in one week? _____

7. How many hours do you work per day? _____

8. How many years or months have you been an RN? _____ or Months? _____

9. Are you employed at more than one hospital as a Per Diem/Resource nurse? _____

10. What is your highest earned degree?
   (1) ADN _____
   (2) Diploma _____
   (3) BSN _____
   (4) MSN _____
   (5) Other (specify) _____

11. How many years have you been a full-time staff nurse? _____

12. How many years have you been a per diem/resource nurse? _____

13. How many sick days have you taken in the last year? _____

14. Check which background you most associate yourself with (you may check more than one).
   (1) African-American _____
   (2) Asian _____
   (3) Caucasian _____
   (4) Hispanic _____
   (5) Native-American _____
   (6) Other (Specify) _____

APPENDIX E

Cover Letter

Dear Nursing Colleague,

As a master's student in nursing at Grand Valley State University, I am interested in examining the effects of stress and burnout in nursing today. A thorough understanding of how stress effects one's work would be important for this study.

You are invited to participate in a study involving nurses and their reactions to stress. Your participation is strictly voluntary. There is a minimal psychological risk: the questions may stimulate feelings of stress that were not previously considered. If you do not wish to participate please stop, place the material in the envelope provided and return it to the researcher. All information will be kept strictly confidential and data will be coded so that identification of a person will not be possible. To ensure anonymity, please do not put your name anywhere on the questionnaire.

The questionnaire will take approximately 15 minutes to complete. If you choose to participate, you may complete and return your questionnaire in three ways: You may complete the questionnaire at this time and hand it back to the researcher within the sealed envelope provided, you may complete the questionnaire at your convenience and mail it to the researcher. If you choose to mail the questionnaire, a self-addressed stamped envelope will be provided. Finally, you may place the completed questionnaire in the marked box located near the employee mailboxes. By returning the questionnaire, your consent to have the data reported in the study is implied .

Thank you for taking the time to participate by completing the questionnaire. If you have any questions please contact me via e-mail, or phone. For questions concerning your rights as a participant, you may contact Paul Huizenga, Chair of the Human Research Review Committee, Grand Valley State University at 616-895-2472.

Sincerely,

Carrie Hansen, RN
(616) 774-3284
Carrie.Hansen@gte.net

APPENDIX F

Permission to use the Cognitive Hardiness Scale

From: KNOWACK@aol.com <KNOWACK@aol.com>
To: carrie.hansen@gte.net <carrie.hansen@gte.net>
Date: Monday, January 10, 2000 6:38 PM
Subject: Permission to Use the Cognitive Hardiness Scale

TO: Carrie Hansen
From: Kenneth ZM. Nowack, Ph.D.

January 10, 2000

I am providing you permission to reproduce and use the Cognitive Hardiness scale as part of the Stress Profile published by Western Psychological Services for research purposes only. You may use this scale in conjunction with your research study and have permission to reproduce, utilize and score this scale for this stated purpose.

Kenneth M. Nowack, Ph.D.
Organizational Performance Dimensions
knowack@opd.net
www.opd.net
310.450.8397

APPENDIX G

Permission to Use the Staff Burnout Scale for Health Professionals

August 18, 2000

ATTN: Amy Mclain

To whom it may concern,

I am a Master's Student in Nursing at Grand Valley State University. I am writing to request permission to print a copy of the "Staff Burnout Scale for Health Professionals" (Jones, 1980) in the appendices of my thesis entitled: "Is There a Relationship Between Hardiness and Burnout in Full-Time Staff Nurses Versus Per Diem Nurses?"

Sincerely,

[redacted]

Carrie Hansen

OK

[redacted]

APPENDIX H

Approval From Grand Valley State University Human Research Review Committee

GRAND VALLEY
STATE UNIVERSITY
1 CAMPUS DRIVE • ALLENDALE, MICHIGAN 49401-9403 • 616/895-6611

March 29, 2000

Carrie Hansen
1117 5th St.
Grand Rapids, MI 49504

Dear Carrie:

Your proposed project entitled **Is There a Relationship Between Hardiness and Burnout in Full-time Staff Nurses Versus Per Diem Nurses** has been reviewed. It has been approved as a study which is exempt from the regulations by section 46.101 of the Federal Register 46(16):8336, January 26, 1981.

Sincerely,

[redacted]

Paul A. Huizenga, Chair
Human Research Review Committee

APPENDIX I

Approval From Spectrum Health Research and Human Rights Committee

Spectrum Health

Downtown Campus
100 MICHIGAN STREET NE GRAND RAPIDS MI 49503-2560
616 391 1774 FAX 391 2745 *www.spectrum-health.org*

April 10, 2000

Carrie Hansen, RN, BSN
1117 Fifth St. N.W.
Grand Rapids, MI 49504

Dear Carrie,

The Nursing Research Committee has completed the review of your research proposal, *"Is There a Relationship Between Hardiness and Burnout in Full-time Staff Nurses Versus Per Diem Nurses?"* at the March 15, 2000 committee meeting. After reviewing your revisions, I am pleased to inform you that your proposal has received approval from our committee. Dr. Larry Baer did have some suggestions for your data analysis and you indicated that you would follow up with him regarding that particular section.

You are ready to proceed to the Hospital Research and Human Subjects Committee. Contact Linda Pool at 391-1291 for those arrangements.

As per Nursing Research Committee policy, you will be assigned a sponsor who will serve as a resource to you during this study. Jacquie Oliai has agreed to serve in that capacity. Please contact her at 774-7671 when you are ready to begin data collection, and keep her informed of your progress during the study.

Upon completion of your research study, we will look forward to an oral and/or poster presentation in a format appropriate to the topic and in timing with other educational offerings. We also encourage you to present your findings via conference presentations and publication.

Please feel free to call me if you have any questions or need further clarification. I can be reached at 391-2676.

Sincerely,

[redacted]

Jan Hodges, MSN, RN
Manager, Nursing Education, Advanced Practice, and Research
Chairperson, Nursing Research Committee

c: Linda Pool, Research Office
Kathy VanRhee, Director, Resource Center, MC #18
Jacquie Oliai, Clinical Nurse Specialist, MC #458

APPENDIX I

Approval From Spectrum Health Research and Human Rights Committee

Spectrum Health

Downtown Campus
100 MICHIGAN STREET NE GRAND RAPIDS MI 49503-2560
616 391 1774 FAX 391 2745 *www.spectrum-health.org*

May 9, 2000

Carrie Hansen, RN, BSN
1117 Fifth St. N.W.
Grand Rapids, MI 49504

Dear Ms. Hansen:

By means of the expedited review process your project entitled, "Is There a Relationship Between Hardiness and Burnout in Full-Time Staff Nurses Versus Per Diem Nurses?", was given approval by the Spectrum Health Research and Human Rights Committee. The Spectrum Health number assigned to your study is #2000-059.

This approval does not include the awardence of any monies for your study.

Please be advised that any unexpected serious, adverse reactions must be promptly reported to the Research and Human Rights Committee within five days; and all changes made to the study after initiation require prior approval of the Research and Human Rights Committee before changes are implemented.

The Research and Human Rights Committee and the F.D.A. requires you submit in writing, a progress report to the committee by **March 1, 2001,** and you will need reapproval should your study be ongoing at that time. Enclosed are some guidelines, entitled "Protocol Points", for your convenience in working with your study.

If you have any questions please phone me or Linda Pool at 391-1291\1299.

Sincerely,

[redacted]

Jeffrey S. Jones, M.D.
Chairman, Spectrum Health Research and Human Rights Committee

JSJ/jfn

c: Jan Hodges, MSN, RN
File

APPENDIX J

Approval From Saint Mary's Mercy Medical Center Nursing Research Committee

SAINT MARY'S
MERCY MEDICAL CENTER

Nursing Research Committee
200 Jefferson S.E.
Grand Rapids, MI 49503

Carrie Hansen, RN
1117 Fifth St. NW
Grand Rapids, MI 49504

Dear Carrie,

The Nursing Research Committee has completed the review of your proposed research study, Is there a Relationship Between Hardiness and Burnout in Full-time Staff Nurses Versus Per Diem Nurses? After reviewing the modifications that were made, the committee has approved this study for implementation at Saint Mary's. The study was approved as exempt from regulations by the chairperson of SMMMC Institutional Review Board. You should be receiving a letter from her confirming this.

Sue Neureuther has agreed to be your liaison to the committee for the duration of your study. She will be available for any questions or problems that may arise. Sue can be reached at 752-6767.We ask that you keep her informed of any problems and of your progress. At the conclusion of your study, we ask that you submit a copy of your thesis to the research committee chairperson.

Thank you for selecting Saint Mary's as one of your data collection sites. We as a committee wish you success in your master's thesis.

Sincerely,

[redacted]

Sherri Veurink-Balicki, RN, MSN, CEN
Chairperson, Nursing Research Committee
Saint Mary's Mercy Medical Center

APPENDIX J

Approval From Saint Mary's Mercy Medical Center Nursing Research Committee

200 Jefferson S.E.
Grand Rapids
Michigan 49503
616 752-6090

April 10, 2000

Ms. Carrie Hansen
1117 5th Street
Grand Rapids, Mich. 49504

Dear Ms. Hansen:

I have reviewed your proposed project entitled **"Is There a Relationship Between Hardiness and Burnout in Full-time Staff Nurses Versus Per Diem Nurses."** It is my opinion that this study is exempt from the regulations of section 46.101 of the Federal Register. Therefore, you have approval to use your study at Saint Mary's Mercy Medical Center without review by the full IRB membership.

We wish you well in this endeavor.

Sincerely,

[redacted]

Sister Myra Bergman
IRB Chair