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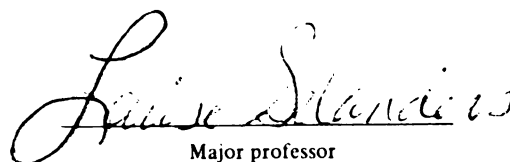


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**HARDINESS: IT'S RELATIONSHIP TO STRESS IN
GRADUATE NURSING STUDENTS**

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**HARDINESS: IT'S RELATIONSHIP TO STRESS IN
GRADUATE NURSING STUDENTS**

By

Laurie L. Porter

A THESIS

**Submitted to
Michigan State University
in partial fulfillment of the requirements
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ABSTRACT

HARDINESS: IT'S RELATIONSHIP TO STRESS IN GRADUATE NURSING STUDENTS

By

Laurie Porter

Nurses are a vital component of the health care delivery system. During the last decade, there has been increasing recognition of the stress experienced by nurses. Hardiness is viewed as a personality characteristic that mediates the harmful effects of stress.

The purpose of this study was to explore the relationships of both total personality hardiness and the three subscales of hardiness, that is, commitment, control, and challenge to stress resistance. A descriptive correlation design was used to investigate the relationship of hardiness to stress in a graduate nurse population. Suzanne Kobasa's theory of hardiness provided the conceptual framework for this study.

The findings supported a relationship between control, commitment and challenge. These results are consistent with the view that the personality characteristic of hardiness may moderate the effects of stress by way of cognitive process. Advanced Practice Nurses can use these findings to begin an exploration of further research devoted to the concept of hardiness.

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INTRODUCTION

Hardiness is viewed as a personality characteristic that mediates the harmful effects of stress (Kobasa, 1977). Stress is considered to be an integral facet of contemporary life (Seyle, 1980). Stress has been shown to result in compromised health status, to the extent of actual disease process (Seyle, 1978; Sutterley, 1986), and has been linked to burnout (Maslach, 1986; Topf, 1989). Human responses to the same stressor or stressful situation vary markedly, as do adaptation outcomes. Adaptation is a complex process involving numerous internal and external factors that influence response and the subsequent level of adaptation established. The hardiness characteristic has been identified as a motivating factor in resolving stressful situations and in adapting to these conditions (Boyle, Grap & Thornby, 1991).

During the last decade, there has been increasing recognition of the stress experienced by nurses (Bates & Moore, 1975; Beszterczey, 1977; Cassem & Hackett, 1972; Hay & Oken, 1972; Kornfeld, 1971; Quinby & Bernstein, 1971; Wertzel, 1977). Although some stressful situations are specific to a particular type of nursing unit, nurses are subject to general stress which arises from the physical,

psychological, and social aspects of the work environment (Edelstein, 1966; Hay & Oken, 1972; Kornfeld, 1971; Malone, 1964; Menzies, 1960; Price & Bergen, 1977; Schulz & Aderman, 1976; Vreeland & Ellis, 1969). While awareness of nursing stress and its consequences has grown, there has been limited research to investigate the role of hardiness as a mediator of stress within the nursing profession. The growth of corporate orientation for health care structures with a focus on bottom-line management has radically altered the role of the nurse (Snyder, 1995). With the organization's emphasis on performance, productivity, and outcomes, successful nurses are now integrating the management of the delivery of nursing care with the management of complex corporate structures and relationships. Stress is an integral part of this process and must be managed effectively if the nurse is to succeed.

For a considerable time, there has been growing concern about work stress and its impact on nurses' and other healthcare professional's. While previous studies of hardiness have looked at stress in the acute care nurse setting, there has been little investigation of stress and hardiness within the Advanced Practice Nurse (APN) role.

Advanced Practice Nurses within the primary care role have been identified as risk-takers within the nursing profession. Certainly, they are often in prime positions to implement changes in health care delivery and respond

creatively to the rapid changes that characterize health care today.

The very nature of the APN's role implies that the nurses are willing to try new identities and take on new aspects of their practice and increased accountability. With increased accountability and change there is inherent stress.

Fundamental to the formulation of hardiness is the existential position that individuals can rise to the challenges of their environment and turn stressful life events into possibilities or opportunities for personal growth and benefit. It is the combined effect of commitment, control, and challenge, acting as a resistance resource, that mitigates the detrimental effects of stress.

Human responses to the same stressor or stressful situation vary markedly as do adaptation outcomes. Adaptation is a complex process involving numerous internal and external factors that influence response and the subsequent level of adaptation established. The hardiness characteristic has been identified as a motivating factor in resolving stressful situations and in adapting to these conditions (Boyle, Grap, & Thornby, 1991).

Hardiness is a personality characteristic with three dimensions that includes a sense of commitment to one's self and work, the perception of control over one's environment, and the tendency to view changes as a challenge, or stimulus

to growth, rather than as a threat to security (Kobasa 1982b).

Increased level of hardiness has been associated with the perception of less stress and fewer health problems among various occupational groups. Among individuals exposed to common stressors, some defend successfully with minimal effort, while others must mount a more valiant defense (Jenkins, 1979). According to Lazarus and Folkman's transactional model of coping, differences in mastery of stress exert their influence primarily in the person's appraisal of the stressful encounter (Lazarus & Folkman 1984). Cognitive appraisal is an intrapsychic process translating objective events into stressful experiences, which may be positive for one person and negative for another.

Lazarus and Folkman distinguish between primary and secondary appraisal. Primary appraisal is the individual's assessment of a situation as benign-positive, stressful or irrelevant. Secondary appraisals include harm/loss, threat and challenge. Secondary appraisal evaluates what might and can be done based on one's coping resources. Factor's affecting one's appraisal of a potentially stressful situation may be person-related, such as hardiness and ways of coping, or environmental such as social support.

Those individuals with less hardiness have demonstrated increased stress and exhaustion. This is probably related to the way the individual perceives the stressor and the

coping mechanism that is available to deal with that event. In other words although the stressor may be the same upon two individuals the perception of that stressor will vary as will the coping mechanisms to address it. Hardiness is expected to lead to less stress, less emotional exhaustion, and fewer health problems via more effective coping and a stress buffering effect.

Work related stress and emotional exhaustion is associated with greater health problems in the form of anxiety, depression, and somatization (Lindsey, & Hills, 1992).

Stress, sometimes referred to as distress, is usually defined as the psychological or subjective discomfort that occurs when stressors are perceived to be too demanding or to exceed one's coping capacity (Lazarus, 1966; Mechanic, 1978; Selye, 1956). Most stress theories conceptualize stressors as negative factors in the environment, chronic strains, or life events that have the potential to cause stress. Research has identified numerous stressors involved in nursing including dealing with death and dying, frustrated ideals, noise pollution, interpersonal conflicts, lack of knowledge, and insufficient social support (Claus & Bailey, 1980; Duxbury, Armstrong, Drew, & Henly, 1984; Gray-Toft & Anderson, 1985; Kelly & Cross, 1985; Lewis & Robinson, 1992; Topf & Dillon, 1988). Typically, the more stressors' one has to deal with, the greater the likelihood of increased stress (Lazarus, 1966; Selye, 1956).

Emotional exhaustion has long been accepted as the depleted emotional state resulting from chronic exposure to stress (Selye, 1956). More recently, work-related emotional exhaustion has been viewed as one of several characteristics of burnout in health professionals (Cartwright, 1980; Maslach & Jackson, 1981). Research has shown that greater work-related stress is often linked with increase emotional exhaustion in hospital nurses (Oehler, Davidson, Starr, & Lee, 1991).

The World Health Organization defined health as "a state of complete physical, mental, and social well-being" (Pender 1982). Health problems, then, are physical, mental, and social conditions that impede progress toward a goal of perfect health. Numerous studies have provided support for the contention that nurses exposed to various work-related stressors will undergo stress and consequent emotional exhaustion (Claus & Bailey, 1980; Duxbury, Armstrong, Drew, & Hemly, 1984; Gray-Topf & Anderson, 1985; Kelly & Cross 1985; Oehler, Davidson, Starr, & Lee, 1991; Topf, 1989; Topf & Dillon, 1988). Furthermore, work-related stress and/or emotional exhaustion has been linked with health problems in nutrition, such as overeating and anorexia (Lewis & Robinson, 1992; Topf, 1988), increased alcohol use (Haack, 1988), and psychological symptoms (Jennings, 1990).

Personality hardiness has been defined as consisting of three beliefs. In particular, hardiness consists of 1) commitment-the belief that persistence in one's goals will

result in something meaningful; 2) control-the belief that one can influence ongoing life events; and 3) challenge-the belief that negative life events can be turned around to result in positive outcomes (Kobasa, 1979; Maddi & Dane, 1982). Hardiness is expected to lead to less stress, less emotional exhaustion, and fewer health problems via more effective coping and a stress buffering effect. That is, individuals who are more hardy are more likely to use more effective coping. This reduces negative health outcomes due to a decrease in overall strain and emotional mobilization. At the same time, hardiness insulates individuals (the stress-buffering effect) for the overall risk of health problems (Maddi & Kobasa, 1984; Maddi & Dane, 1982). Research involving highway patrol officers, business executives, lawyers, and company managers has provided mixed support for the view that hardiness facilitates less stress and fewer health problems (Hills & Norvell, 1991; Kobasa, Maddi, & Corrington, 1981; Kobasa, Maddi, & Zola, 1983; Kobasa & Puccetti, 1983; Weibe, 1991). This pattern has also occurred in studies of nurses (McCranie, Lambert, & Lambert, 1987; Rich & Rich, 1987; Topf, 1989).

In relation to hardiness, control is the belief one can influence events rather than remain helpless in the face of adversity. People with control feel both capable and empowered to achieve desired outcomes. Those lacking this attribute feel that others (the physician, the patient, the managed care system) control their destiny. Of the three

dimensions of hardiness, control is probably the most difficult for nurses to attain, largely because professionally we have been taught to rely on others for direction and have not fostered self-confidence in our ability to make decisions (Wolf, 1990).

Challenge involves crisis. Crisis contains both danger and opportunity. The hardy individual tends to focus on the opportunity as a stimulus to growth rather than on the danger as a threat to security. The individual sees change as positive rather than negative; the glass as half full rather than half empty. As a result, they engage in positive self-talk that leads to increased coping skills and increased likelihood of success. This positive energy and outlook are vitalizing to an organization, while the opposite is extremely draining and potentially damaging. This type of mind-set is not created overnight. It requires consistent role modeling over a period of time.

Research supports the premise that hardiness as a personality characteristic facilitates less stress and emotional exhaustion. Graduate school is only the beginning of a career loaded with professional stress, the potential for emotional exhaustion, and the need for adaptation to survive and be productive in a managed care environment. By promoting hardiness while the nurse is at a student level, the tool they will need to face challenges in day to day practice is refined and developed.

It is possible that nurses responses to stress may vary based personality characteristics. Retaining well-qualified nurses may mean that they should be assessed for personality characteristics that allow them to integrate stress into their personal and professional lives. One personality characteristic that has demonstrated the ability to mediate stress is psychological hardiness.

Attitude toward a situation predicts longevity, and the individual who believes that they make a special contribution will continue to function in a situation (Siegal 1986). For example, if nurses hold positive attitudes regarding the control they have in their nursing practices, are committed to their practices, and are challenged by their practices, they are likely to stay in their positions longer than if they do not have positive attitudes toward their work. Additionally, they may consider daily stressors in their practices as challenges. Third, the professionals may be committed to events in their lives in general, and to their practices in particular. In summary, there may be a relationship between possessing positive attitudes toward control, commitment, and challenge, otherwise known as hardiness (Kobasa, 1979), and being a nurse who functions well under stressful conditions.

The Foundation of the Hardiness Concept

The genesis of the concept of hardiness can be traced to Kobasa (1979), whose work is central to current hardiness research. The proposition underlying Kobasa's report was

that people who experienced high stress but remained healthy had a different personality structure than people who experienced high levels of stress and became ill. One explanation for the variation in response to stressful life events is a constellation of personality characteristics known as hardiness.

Existential psychology is also central to the theoretical underpinnings of hardiness (Kobasa, 1979, 1982). Two major premises of existential theory are pertinent. The first is that personality is actively constructed through a dynamic process, and secondly that although life is stressful because it is always changing, people can turn stressful life events into opportunities for growth (Kobasa, 1982). Three interrelated concepts are especially relevant to this orientation: a) control, the belief that individuals can influence life events; b) commitment, the ability to sustain curiosity and feel deeply involved in life activities; and c) challenge, a view of change as normal and an exciting incentive for further individual development (Kobasa, 1979; Kobasa, Maddi, & Courington, 1981).

Personality hardiness is a set of beliefs about oneself and the world one lives in. Hardier persons take control of their lives, believe that commitment to goals will result in positive outcomes, and perceive daily stressors as challenges.

Hardiness is a construct with widespread appeal to nurse researchers. Because of its popularity, there is a need to analyze hardiness carefully.

Analysis of the Concept of Hardiness

The concept of hardiness, as a personality characteristic, has generated considerable interest and research in psychology. However, it is a relatively new perspective for nursing that is of particular interest. Although the concept of hardiness has been discussed and examined for over a decade it has not been clearly defined for nursing (Kobasa, 1979, Kobasa, Maddi, & Courington, 1981; Nowack, 1989).

Life itself is portrayed as being continuously in the process of change and therefore inherently stressful. The healthy individual is able to see life stressors as challenges and to utilize them for personal growth. Nursing is an occupation loaded with stressors. If nurses had a clearer understanding of what hardiness is, and how it relates to the stressors of daily practice, then interventions could be initiated and tested to ascertain whether strategies to promote hardiness would contribute to reduction of burnout from stressful life events.

Conceptual Framework

For some time, the focus of stress and illness research has been on resistance resources (Antonovsky, 1979, 1987). These resistance resources potentially prevent the psychological tension of everyday life from becoming

debilitating stress. Some of these resistance resources include one's physiological adaptability, social support, cultural context, and personality (Antonovsky, 1979).

Following the logic of this line of research, Kobasa (1979) developed the concept of personality hardiness. Hardiness comprises three dimensions: Commitment, challenge, and control. Hardy individuals have a higher sense of commitment or purpose (that is, to work, to self, etc.) as opposed to a sense of alienation. These individuals tend to perceive life changes as challenges rather than threatening to their security. Finally, hardiness involves a sense of control over one's life, as these individuals intervene in their own behalf when needed.

Hardiness has been theorized to affect stress and health in two ways. Greater hardiness has been conceived of as being associated with less psychological stress and consequently greater health because hardy individuals alter their perception of stress (i.e., to be a challenge). Secondly, both hardy and non-hardy individuals may undergo high levels of stress due to life events. However, hardy individuals are more likely to use effective coping strategies and social resources to reduce stress and prevent illness. This tendency has been called the stress buffering effect of hardiness (Kobasa, 1982; Kobasa & Puccetti, 1983).

The present contention is that burnout is a negative health outcome of occupational stress and that hardiness affects occupational stress and burnout much as it affects

life event stress and illness (i.e., Kobasa, 1979). These relationships are depicted in Figure 1.

Most conceptualizations of stress (Lazarus, 1966; Mechanic, 1978; Selye, 1975) imply that it is the psychological discomfort that occurs when environmental stressors are perceived as too demanding or as exceeding one's coping abilities. In Figure 1, the environmental demands stem from occupational events. Burnout has been defined as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment resulting from stress linked with occupational events in health careers (Cartwright, 1980; Maslach & Jackson, 1981). It is theorized that greater demands from occupational events are linked with greater stress and consequently greater burnout. Studies have identified sources of occupational stress linked with burnout in nurses. These have included interpersonal conflicts, ethical problems, dealing with administration, dealing with death and dying, inadequate knowledge and skill, work load, and frustrated ideals (Claus & Bailey, 1980; Duxbury, Armstrong, Drew, & Henly, 1984; Gray-Toft & Anderson, 1985; Kelly & Cross, 1985; Topf & Dillion, 1988).

In Figure 1, demands of occupational events cause a stress event which in the hardy individual leads to effecting coping and an ability to utilize resources to avoid burnout.

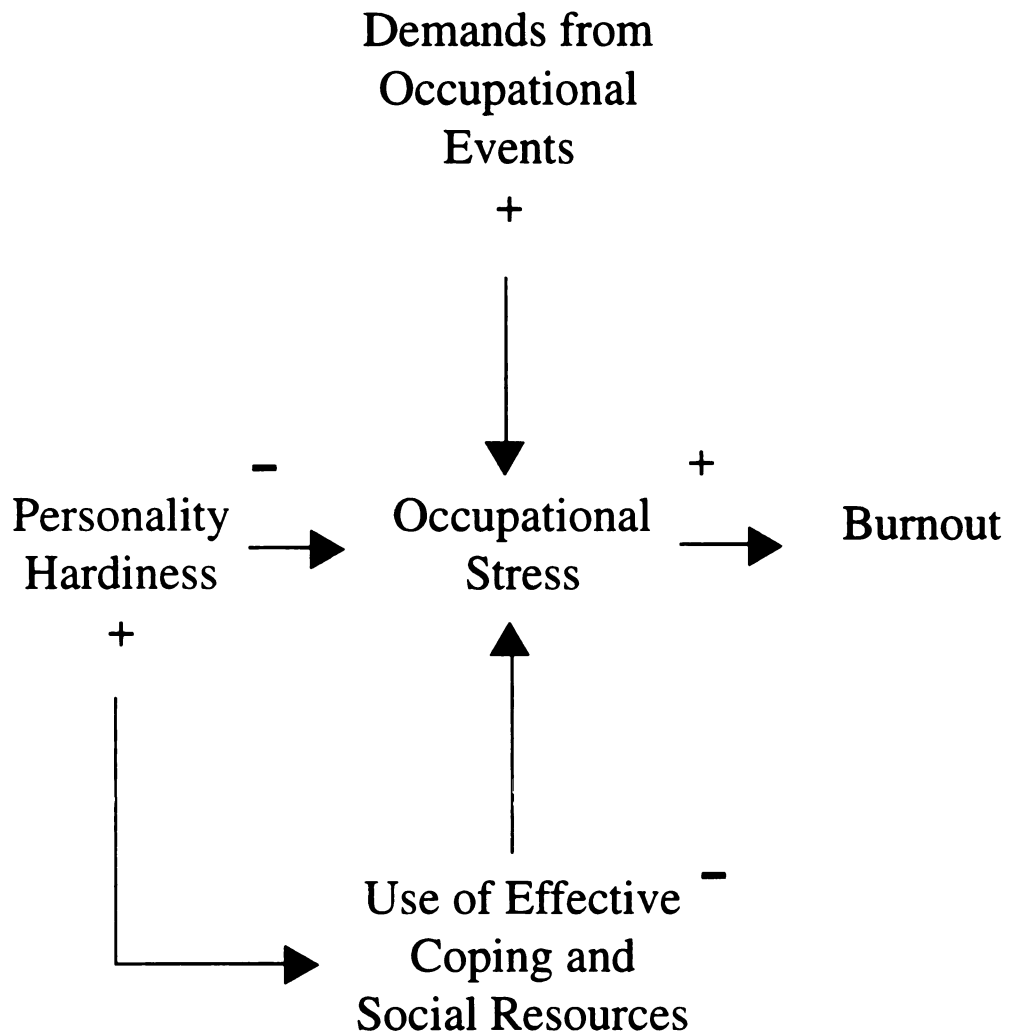


Figure 1. Relationships between hardiness, stress, and burnout. In the occupational setting pluses and minuses indicate positive and negative relationships between variables. Adapted from Kobasa (1982a)

Hardiness is felt to buffer against stress effects. Less stress, in turn, results in less burnout. Burnout is a common phenomenon in many professions. But it's most likely to occur in highly stressful occupations-like nursing. Burnout is defined as physical and emotional exhaustion that involves a negative job attitude and a poor professional self-concept.

It's characterized by apathy, alienation, job dissatisfaction, and a depersonalization of patients (Tarolli-Jager, 1994).

Recognizing that some individuals handle stress better than others' researchers have begun to measure the variables that reduce or buffer burnout. One of these buffers is personal hardiness. It is thought that hardiness changes the perception of stress for the individual. In general, the higher your level of personal hardiness, the less likely you are to experience burnout. Burnout and stress cause some nurses to leave the profession, and plague many more who are still in nursing. Personal hardiness is an instrument that an individual can use to take control of events that invoke challenge and grow from that experience.

Review of the Literature

In order to understand why some people are more resistant to the deleterious effects of stress, Kobasa (1979, 1982) examined extensively three personality characteristics: commitment, control, and challenge. Together, these comprise a personality style that resists

stress and is considered "hardy." The evolution of the concept of hardiness is based on the work of personality and social psychologists who observed that individuals differ in their perception of environmental stressors. Specifically, an individual's orientation toward life or characteristic interests and motivation is considered an important factor in determining the impact of a given stressful life event. Hardiness has been defined as "a constellation of personality characteristics that function as a resistance resource in the encounter with stressful life events" (Kobasa & Maddi, 1977).

The characteristic of commitment is the ability to believe in the "truth," important and value of who one is and what one is doing, and consequently to become involved in life (Kobasa, 1982). The individual's sense of commitment extends past the person to a community of others and provides a sense of purpose that acts to diminish the perceived threat of a stressor.

Control refers to the tendency to believe and act as though one can influence the course of events. Individuals with control seek explanations as to why something is happening, not simply in terms of another's action but also in terms of one's own responsibility. This allows people to think that stressors can be manipulated and are therefore the direct result of their action.

Challenge is based on the belief that the environment is ever changing and that the individual can perceive a

stressor as an opportunity for personal growth, rather than as a threat to security. According to Kobasa (1982), individuals who welcome challenge can use resources available to cope with stressors.

The utility of hardiness as a mediator in an individual's response to stressful events has been supported in several studies. In a few studies, hardiness has been found to prevent illness in groups of employees who were exposed to high levels of stress (Kobasa, 1979; Kobasa, Maddi, & Courington, 1981). The early population on which Kobasa (1979) tested her hypothetical frame work was comprised of middle and upper-level male executives. In an attempt to verify the components of hardiness and to construct a valid tool to measure hardiness, she studied three groups of executives. A total of 75 high stress/high illness executives formed one group, 86 high stress/low illness executives formed the second group, and 81 subjects were used to cross validate results of the analysis of data. The components of commitment challenge, and control were measured using a composite of several data collection instruments: For commitment, the alienation from self and the alienation from work scales of the Alienation Test was utilized (Maddi, Kobasa, & Hoover, 1979). For challenge, the security scale of the California Life Goals Evaluation Schedule (Hahn, 1966) and selected scales from the Personality Research Scale was utilized (Jackson, 1974). Finally, for control, the external locus of control (Rotter,

Seeman, & Liverant, 1962), and powerlessness scale of the Alienation Test (Maddi et al., 1979) was utilized. The Alienation scales were expected to identify the presence of commitment in selected conditions, through a reverse scoring procedure. That is, hardy individuals were expected to score low on scales that measured alienation's from self, from work, from interpersonal relations, from family, and from social contacts. The security scale and the cognitive structure scale measured challenge by testing for perceptions, of interesting experiences, adventurousness, endurance, and vegetativeness. Hardy individuals were expected to score high on interesting experiences and high on security, but they were expected to score low on scales that measure adventurousness and vegetativeness. Aspects of control that were measured referred to external locus of control, powerlessness, achievement, dominance. and leadership.

Meaningfulness was believed to be a component of cognitive control, which is the ability to appraise and incorporate stress into ongoing plans (Kobasa, 1982). Meaningfulness was measured, indirectly, by appraising the presence of nihilism, the characteristic antithetical to meaningfulness. Hardy individuals, according to Kobasa, should score low on a nihilism scale indicating a high level of meaning of the events in their lives. Additionally, hardy individuals were expected to score low on an external locus of control scale. Finally, Kobasa claimed that a

hardy individual should score low on a powerlessness scale, high on an achievement scale, high on a dominance scale, and high on a leadership scale.

After having established two groups who should score differently on a hardiness test, Kobasa attempted to establish the construct-related validity for the combined six instruments that she used to measure hardiness. By using discriminate function analysis, she found that 78% of the subjects was correctly classified, indicating an acceptable level of construct-related validity for the instrument. In summary, high stress/low illness executives tended to be more in control of life events, more committed to their vocations, and more oriented to challenge than were high stress/high illness executives.

The discriminating variable for commitment was commitment to self versus alienation from self. For challenge, the attitude of vigorousness versus vegetativeness was the discriminating variable, internal versus external locus of control discriminated attitudes related to control. Additionally, high stress/low illness executives reported that their lives were less stressful than high stress/high illness executives. Kobasa concluded that the hardy personality was less likely to become ill following stressful life events. Following this early investigation, Kobasa, recommended that a prospective study determine if hardiness precedes and prevents illness that results from stressful life events. Under comparable stress

(high stress/high illness) (Kobasa, 1979). Similarly, the positive effects of hardiness were supported in a variety of empirical studies involving lawyers and gynecological patients (Kobasa, 1982). While the utility of hardiness as a stress-resistance resource was tested in these studies, both employed retrospective designs.

Further research on hardiness, using a prospective design, however, also demonstrated a relationship between this variable and stress-illness in a group of 259 male executives (Kobasa et al., 1981). Personality was studied as a conditioner of the effects of stressful life events on illness onset. Two groups of middle and upper level executives had comparably high degrees of stressful life events in the previous 3 years, as measured by the Holmes and Rahe Schedule of Recent Life Events. One group suffered high stress without falling ill, whereas the other reported becoming sick after their encounter with stressful life events. Illness was measured by the Wyler, Masuda, and Holmes Seriousness of Illness Survey. Discriminate function analysis, on half of the subjects in each group and cross-validated on the remaining cases, supported the prediction that high stress/low illness executives show, by comparison with high stress/high illness executives, more hardiness, that is, have a stronger commitment to self, an attitude of vigorousness toward the environment, a sense of meaningfulness, and an internal locus of control.

Some studies have been used to suggest how hardiness affects health (Funk & Houston, 1987; Hull et al., 1987). Among individuals under stress, those who have a greater sense of control over what occurs in their lives will remain healthier than those who feel powerless in the face of external forces. The highly stressed but healthy individual is hypothesized to have a) decisional control, or the capability to autonomously choose among various courses of action to handle the stress; b) cognitive control, or the ability to interpret, appraise, and incorporate various sorts of stressful events into an ongoing life plans and, thereby, deactivate their jarring effects; and c) coping skill, or a greater repertory of suitable responses to stress developed through a characteristic motivation to achieve across all situations. In contrast, the highly stressed persons who become ill are powerless, and low in motivation for achievement. When stress occurs, they are without recourse for its resolution, give up what little control they do possess, and succumb to the incapacity of illness. Among persons under stress, those who feel committed to the various areas of their lives will remain healthier than those who are alienated. Committed individuals have a belief system that minimizes the perceived threat of any given stressful life event. The encounter with a stressful environment is mitigated by a sense of purpose that prevents giving up on one's social context and oneself in times of great pressure.

Although commitment to all areas of life-work, social institutions, interpersonal relationships, family, and self-should be characteristic of highly stressed persons who do not fall ill, one area is singled out as particularly important for health. Staying healthy under stress is critically dependent upon a strong sense of commitment to self. An ability to recognize one's distinctive values, goals, and priorities and an appreciation of one's capacity to have purpose and to make decisions support the internal balance and structure that White and other theorists deem essential for the accurate assessment of the threat posed by a particular life situation and for the competent handling of it (Hamburg & Adams, 1974).

While the exact mechanisms remain somewhat speculative, it has been hypothesized that hardiness acts as a buffer of stressful life events or has direct (or main) effects and indirect effects on the way stressful life events are perceived (Kobasa, 1979; Kobasa & Puccetti, 1983).

Specifically, it is thought that the indirect effects of hardiness occur when there is a decrease in the use of ineffective or regressive coping strategies. In a study of lawyers, Kobasa (1982) noted that complaints of stress symptomatology were mediated by the personality trait of commitment as well as by the use of regressive coping strategies.

Determination of how the direct or buffering effects of hardiness work as compared to the indirect effects, has been

less clear. According to Kobasa (1979), hardy individuals in highly stressful situations do not become ill. In such instances, it is hypothesized that hardiness reduces the impact of stressful life events by increasing the use of successful coping strategies (Hull, 1987). While Kobasa, Maddi, and Corrington (1981) found a significant main effect for hardiness, they did not find a significant hardiness-stress interaction. In fact, a significant main interaction between life stress and hardiness has been demonstrated in only one study (Kobasa et al., 1981). These findings are important when considering that a significant hardiness-stress interaction is necessary in order for hardiness to reduce the impact (or buffer the effects) of stressful life events. Examples of regressive coping strategies include avoidance of problems, absenteeism, substance abuse and the blaming of others for difficulty at work and home. Rhodewalt and Augustsdottir (1984) reported that hardy individuals do not experience life events that are qualitatively different from those experienced by non-hardy individuals, but they are more likely to perceive the events they do experience as positive and under their complete control.

In a study that examined the cognitive and physiological responses of undergraduates, Allred and Smith (1989) found that hardy individuals use more positive self-statements than did other individuals. These results are consistent with the view that the personality characteristic

of hardiness may moderate the effects of stress by way of cognitive processes (Allred & Smith, 1989).

Several authors have studied the effect of personality hardiness on burnout. One study examined 107 staff nurses from a variety of intensive care and non-intensive care areas to ascertain if personality hardiness moderated the impact of job stressors on burnout (McCranie, 1987). Burnout was significantly associated with higher levels of perceived job stress and lower levels of personality hardiness. Hierarchical multiple regression analysis indicated that work stressors, particularly stress due to workload, and hardiness was significant predictors of burnout. Hardiness had beneficial main effects in reducing burnout. Hardiness had beneficial main effects in reducing burnout, but did not appear to prevent high levels of job stress from leading to high levels of burnout.

Rich & Rich (1987) studied the effects of personality hardiness and burnout in 100 female staff nurses from a variety of units in an acute care hospital. Burnout and hardiness were inversely related; 41% of the variance in burnout scores were accounted for by the combination of low hardiness and younger age. Two-way analysis of variance showed that the effects of personality and age on burnout scores were accounted for by the combination of low hardiness and younger age. Two-way analysis of variance showed that the effects of personality and age on burnout were independent and additive rather than interactive.

The nurse's ability to function competently and adapt to the stress of a given situation depends upon the use of effective coping strategies. Thirty critical care nurses from a Midwestern Veterans' Administration Medical Center were surveyed to assess coping strategies in response to work-related stress (Lewis & Robinson 1992). The strategies used by 70% of the respondents at least some of the time included discussing problems with co-workers, problem-solving, watching television/reading and using caffeine. However, the study did not examine the effect of type of coping strategy on the development of burnout.

Ceslowitz (1989) examined the relationship between coping and burnout using 150 randomly selected nurses from four hospitals. Nurses who experienced decreased levels of burnout used planned problem solving, positive reappraisal, seeking social support and self-controlling coping strategies. Nurses who experienced increased burnout used escape/avoidance, self-controlling and confronting strategies, although they used self-controlling strategies to a lesser degree.

To deal adequately with burnout, the factors contributing to its occurrence and intensity must be clearly documented. Further, research-based strategies to prevent burnout must be identified.

Summary of Literature Review

In a series of papers, Kobasa and associates presented a model of individual vulnerability to stress. They

hypothesized that individuals who remain healthy after experiencing high degrees of life stress exhibit a constellation of attitudes, beliefs, and behavioral tendencies that distinguish them from those who become ill. This constellation is labeled hardiness and comprises three dimensions: Commitment, control, and challenge (Kobasa & Maddi, 1977). Commitment reflects a generalized sense of purpose and meaningfulness expressed as a tendency to become actively involved in ongoing life events rather than remaining passively uninvolved. Control refers to the tendency to believe and act as if one can influence the course of events rather than feeling helpless when confronted with adversity. Challenge is defined as the belief that changes rather than stability is normal life and that change can be a stimulus to growth rather than a threat to security. Kobasa hypothesized that these interrelated elements of the hardy personality style mitigate the negative impact of stressful life events by influencing both cognitive appraisal (e.g., not interpreting events as meaningless, overwhelming, or undesirable) and coping (e.g., investigating activities that lead to an effective resolution of problems caused by the events).

METHODOLOGY

Hypothesis

The research hypotheses were:

1. The three dimensions of psychological Hardiness, that is, commitment, control, and challenge, have a positive relationship.
2. Hardiness will have an inverse relationship to stress.
3. Hardiness will be positively related to the evaluation of personal stressor's as challenging.

Research Design

In this study, self-administered questionnaires were completed by Michigan State University graduate nursing students. The Personal Views Scale, the Nursing Stress Scale, a demographic questionnaire, and consent letter were read and completed by each voluntary participant.

A design using inferential statistics was used to analyze for significant relationships between the independent variable of hardiness and the dependent variable of stress.

Sample

A convenience sample of approximately one hundred and seventeen Michigan State University graduate nursing students was used. Of the one hundred and seventeen graduate nursing students approached to participate in the study, 18 students agreed and returned research packets to Michigan State University College of Nursing for scoring and analysis.

Instrumentation

Two instruments were used to measure the variables in this study. The Personal Views Scale was used to measure hardiness, and the Nursing Stress Scale was used to measure stress. In addition, a demographic data form was used to obtain descriptive data about the sample.

Personal Views Survey (PVS)

The work on Kobasa's PVS began in 1983 with the current tool being established in 1986. A large pool of conceptually relevant items was utilized in its construction. Following item and factor-analysis with multiple samples there was revision of items to produce discriminating and reliable hardiness scores for both the components of control, commitment, and challenge and for the total hardiness measure.

The PVS scale consists of 50 items that share the same format and, according to Kobasa, discriminate respondents well. The instrument uses a four point Likert scale. Examples of the 17 control questions are: "Planning ahead can help avoid most future problems" and "When you marry and have children you have lost your freedom of choice." Commitment is assessed through 16 questions such as "I find it difficult to imagine getting excited about working" and "I don't like things to be uncertain or unpredictable." Seventeen questions such as "I like a lot of variety in my work" and "Most days, life just isn't exciting for me" measure challenge. Appendix I includes the PVS. Ratio

scores are calculated for the components of control, commitment, and challenge. The hardiness score is determined by combining the three component scores in a mathematical formula. Estimates of internal consistency have been reported as Coefficient Alphas $>.90$ for the PVS and equal to or $>.70$ for each of the subscores of control, commitment, and challenge. Appendix F includes a copy of the PVS.

Nursing Stress Scale(NSS)

The NSS consists of 34 items that describe situations that have been identified as causing stress for nurses in the performance of their duties. It provides a total stress score as well as scores on each of seven subscales that measure the frequency of stress experienced by nurses. Test-retest reliability as well as four measures of internal consistency indicated that the NSS and its seven subscales are reliable. The test-retest coefficient for the total scale was 0.81. Four measures of internal consistency were obtained: A Spearman-Brown coefficient of 0.79, a Guttman split-half coefficient of 0.79, a coefficient alpha of 0.89, and a standardized item alpha of 0.89. All four measures indicated a satisfactory level of consistency among items (Gray-Toft, 1981). Test-retest reliability coefficients for four of the seven subscales exceeded 0.70.

The validity of the NSS was determined by empirically investigating its relationship to other important criteria to which stress is theoretically related, namely, trait

anxiety, state anxiety, job satisfaction, and turnover (Gray-Toft & Anderson, 1981). Appendix G includes a copy of the NSS.

Procedure for Data Collection

Review of this study for protection of human subjects was conducted by the University Committee on Research. Following approval, a research packet for each nursing graduate student was forwarded to a participating Michigan State University classroom instructor. Each subject received an informational/consent letter, a demographic form, the Personal Views Survey (PVS), the Nursing Stress Scale (NSS), an answer sheet, and instructions to return to their instructor within a two week time period. Total completion time for the packet was approximately 25 minutes. A code number for each survey packet was provided to assist the investigator in keeping track of the data but protected the confidentiality of the respondent. The completed packet was then returned to the Michigan State College of Nursing for scoring and analysis by the investigator. Results of the survey were communicated to be available in the form of a completed thesis, abstract, or publication. A total of eighteen research packets were returned.

Statistical Analysis

The data were coded and entered into a computer. Descriptive statistics were used to describe the population. Inferential statistics were used to test the hypothesis.

The SPSS statistical software package was utilized for data analysis, with level of significance established at 0.05.

Protection of Human Subjects

The study used volunteer subjects with informed consent. No potentially dangerous or adverse effect to students for participating was known or identified. The study was approved by Michigan State University's University Committee on Research Involving Human Subjects (Appendix E). The data utilized for this study has been maintained on a computer disk by the principal investigator. The subjects were entered by identification numbers only and did not contain any subject identifiers. Thus, no link could be made with the name of any subject for this study.

Research Assumptions

It was assumed that data were collected and logged accurately. It was assumed that all potential subjects were given the opportunity to participate. The assumption was also made that subjects understood the instructions provided and were able to read the instrument, and understood the questions asked, or were provided contact phone numbers to seek sufficient explanations by the researcher in which to candidly and honestly answer the questions. It was assumed that the data were accurately entered.

Demographics

The demographic characteristics of the sample are reported in Table 1. The majority of participants were female, currently married, had children living with them,

Table 1.**Demographic Data**

Please provide the following information about yourself.

1. Age.
 _____ years
2. Gender (Please check appropriate space)
 _____ male _____ female
3. Marital status (Please check appropriate space)
 _____ single/never married
 _____ married
 _____ divorced/separated
 _____ widowed
4. Children
 _____ number living with you
 _____ number living elsewhere
5. Current employment status (Please check appropriate space)
 _____ not working
 _____ working less than 10 hours per week
 _____ working 10-19 hours per week
 _____ working 20-29 hours per week
 _____ working 30-39 hours per week
 _____ working 40 hours or more per week
6. If you are employed, please indicate the type of work in the space provided.

7. Years of experience in Nursing (Please check appropriate space)
 _____ 0-3 years
 _____ 4-7 years
 _____ 8-10 years
 _____ 10-13 years
 _____ 14-16 years
 _____ greater than 16 years
8. Student Status.
 _____ Full Time
 _____ Part Time

Please list the degree you currently hold and in what field.

were working, and had BSN degrees. This study sample consisted of 17 women and 1 man, mean age of 35, 13 married, 4 single and never married, and 1 divorced/separated. Eleven had children living with them and 2 had children living elsewhere. Two were not working currently, one was working less than 10 hours per week, four were working 10-19 hours per week, three were working 20-29 hours per week, seven were working 30-39 hours per week, and one was working 40 hours per week. Four were working in staff/medical surgical positions, two in Obstetrics, two in Surgical Intensive Care, one in Neurological Intensive Care, one in Psychiatric Care, one in the Emergency Department, one Patient Educator, two in Critical Care Unit/Intensive Care, two Enterstomal Specialist, and one in Hospice/Home Care. Years of experience in Nursing were as follows; five 0-3 years, one 4-7 years, one 8-10 years, three 10-13 years, two 14-16 years, and six greater than 16 years. Six were full time students and 12 were part-time students. Twelve had BSN degree, 1 BS degree, 2 MS degree, and 3 with multiple degrees.

Procedure for Data Analysis

Demographics' variables were used to describe the sample. Ratio scores for the control, commitment, and challenge components of the PVS were calculated. The total PVS hardiness score was then calculated utilizing the three ratio scores. As applicable, means and standard deviation,

or correlation's were reported. A scatter plot indicated no significant outliers.

Frequencies on all items were completed to detect errors and strange behaviors. Only one missing datum was detected and no serious strangeness. Three PVS subscales was computed. Computed reliability (Cronbach's Alpha) for NSS, PVS, and each PVS subscale were as listed in Table 2.

Analysis of Research Hypothesis

The three dimensions of psychological hardiness, that is, commitment, control, and challenge have a positive relationship. A Pearson's product-moment correlation coefficient was used to address this hypothesis. A correlation coefficient of .4947 ($p=.018$) was obtained between control and commitment. These results support a positive relationship between control and commitment that is statistically significant.

A correlation coefficient of $-.1776$ ($p=.240$) was obtained between control and challenge. These results support an inverse relationship between control and challenge which is not statistically significant.

A correlation coefficient of .0634 ($p=.401$) was obtained between commitment and challenge. These results support a positive relationship between commitment and challenge which is not statistically significant.

Hardiness will have an inverse relationship to stress. A pearson's product-moment correlation was used to address this hypothesis. A correlational coefficient of .1866

Table 2.

Demographic Characteristics of the Sample (n=18)

Variable	N	%
Age		
24-27	5	.27
28-31	1	.05
32-35	1	.05
36-39	5	.27
40-43	4	.22
44-47	2	.11
Gender		
Female	17	.94
Male	1	.05
Marital Status		
single/never married	4	.22
married	13	.72
divorced/separated	1	.05
widowed	0	.00
Children		
(number living with you)		
1-2	9	.50
3-4	2	.05
(number living elsewhere)		
1-2	2	.05
Current employment status		
not working	2	.11
working less than 10 hrs/wk	1	.05
working 10-19 hrs/wk	4	.22
working 10-29 hrs/wk	3	.16
working 30-39 hrs/wk	7	.38
working 40 hrs or more/wk	1	.05
If employed, type of work		
Obstetrics	1	.05
Medical Surgical	4	.22
Surgical Intensive Care	2	.11
Neurological Intensive Care	1	.05
Intensive Critical Care	2	.11
Psychiatric Unit	1	.05
Emergency Department	1	.05
Patient Educator	1	.05
Enterostomal Therapy	2	.11
Hospice and Home Care	1	.05

Table 2 (cont.)

Variable	N	λ
Years Experience in Nursing		
0-3 years	5	.27
4-7 years	1	.05
8-10 years	1	.05
10-13 years	3	.16
14-16 years	2	.11
greater than 16 years	6	.33
Student Status		
Full time	6	.33
Part time	12	.66
Current Degree		
BS	1	.05
BSN	12	.66
MS	2	.11
Multiple Degree	3	.16

Table 3.

Computed Reliability

 NSS: .9081

PVS: .6785

Control: .5038

Commitment: .7203

Challenge: .6044

All five means were intercorrelated.

($p=.229$) was obtained between the PVS and NSS scores. These results support a relationship between hardiness and stress that is not statistically significant.

Hardiness will be positively related to the evaluation of personal stressors's as challenging.

A pearson's product-moment correlation was used to address this hypothesis. A correlation coefficient of .0321 ($p=.450$) was obtained between NSS and challenge. These results support a positive relationship that is not statistically significant. A list of correlation coefficients is provided in Table 4.

Discussion, Recommendations, and Summary

Sample

In this study, a total of 18 subject's responses were analyzed on the variables of hardiness and stress. The majority of the subjects were female (94%), greater than thirty-six years of age (60%), married (72%), currently working (89%), part-time graduate students (66%), had been in nursing greater than ten years (60%), and had completed BSN degrees (66%).

Bias which may be identified in the above sample are gender (the sample is primarily female), marital status (what influence does external supports hold in regards of the perception of stress), multiple concurrent stressors (work and graduate school). An extraneous variable that should have been considered is socioeconomic status. This factor may influence the heterogeneity of the population

Table 4.

Correlation Coefficients (n=18)

Challenge	1.0000	.0634 P=.401	-.1776 P=.240	.0321 P=.450	.5408 P=.010
Commit	.0634 P=.401	1.0000	.4947 P=.018	.1941 P=.220	.7858 P=.000
Control	-.1776 P=.240	.4947 P=.018	1.0000	.1464 P=.281	.6018 P=.004
Mean_NSS	.0321 P=.450	.1941 P=.220	.1464 P=.281	1.0000	.1866 P=.229
Mean_PVS	.5408 P=.010	.7858 P=.000	.6018 P=.004	.1866 P=.229	1.0000

(Coefficient/(Cases)/1-tailed Significance)

with respect to the dependent variable. For example, in this study of the relationship of the subscales of hardiness and stress, a person's socioeconomic status is likely to be an important extraneous variable because poorer individual's may have increased stress related to financial constraints than more affluent individual's.

Even with these identified biases it is felt that the sample is representative of the accessible population, and the accessible population is representative of the target population.

Instrumentation

Computed reliability (Cronbach's Alpha) for the NSS, PVS, and each PVS subscale fell between the normal range of values between 0.0 and +1.00. The NSS had a high degree of internal consistency with a value of .9081. Indices of

homogeneity estimate the extent to which different subparts of an instrument are equivalent in terms of measuring the attribute. The PVS had a lower degree of internal consistency with a value of .6785. This may be attributed to a combination of a small sample and a small range of responses by this relatively uniform sample. Small ranges of responses implies low variability, which in turn implies a limit to the reliability.

Research Limitations

The number of participating subjects (sample size) is a threat to the external validity of this study, and limit's generalization to the target population. Many published nursing studies result in nonsignificant findings; that is, one or more of the hypotheses are not supported. Clearly researchers run a risk of Type II errors when they use small samples. That is, when small samples are use, the researcher takes a sizable risk that the test result will result in the rejection of the research hypothesis-even when the hypothesis is, in fact, correct. Although there are no simple formulas that indicate how large a sample is needed in a given study, usually the larger the sample the more representative of the population it is likely to be. Large samples are no assurance of accuracy, however. When nonprobability sampling methods are used, even a large sample can harbor extensive bias.

Because practical constraints such as time, availability of subjects, and resources often limit the

number of subjects included in nursing studies, many are based on relatively small samples. In a survey of nursing studies published over four decades (the 1950's to the 1980's), Brown (1984) found that the average sample size was under 100 subjects in all four decades, and similar results were reported in a more recent analysis (Moody, Wilson, Smith, Schwartz, Tittle, & Vancott, 1988). In some cases, a small sample size may be justifiable. A convenience sample of approximately one hundred seventeen students was used, only 18 students participated. There may have been unidentified factors that prevented students from wanting to participate in the study. The study was completed at the beginning of an educational semester. The graduate students involved may have been under increased external stress that could impact their decision regarding participation in a research project. The graduate students may also have been under the incorrect assumption that if they were not currently employed in an acute care setting that the study would not relate to their current status as nurses.

Power analysis builds on the concept of effect size. Effect size is concerned with the strength of the relationship among research variables. If the independent and dependent variables are strongly interrelated, then a relatively small sample is generally adequate to demonstrate the relationship statistically. If the relationship is not strong (perhaps, modest) then a small sample can be risky. Because this population is believed to be relatively

homogeneous with respect to the variables of interest, then the small sample was felt to be adequate, even though, it is recognized that it is at great risk for a Type II error. This sample is relatively homogeneous that could lead to a lack of variability. With a homogeneous sample this lack of variability can make it difficult to identify and/or set a range of responses.

Hypothesis

The first hypothesis stated that the three dimensions of psychological hardiness, that is commitment, control and challenge have a positive relationship. There existed a strong relationship between control and commitment that is significant, there also existed a positive relationship between commitment and challenge that was not significant. Commitment means that an individual knows who s/he is and what s/he is doing throughout her life situations. An individual possessing control believes and acts as if she or he is able to influence life's course of events. An individual who is committed to life events has a sense of control over these events. When it is believed that change, not stability, is the normative mode of life, challenge is evident. The individual views stressful life events as opportunities and incentives for personal growth. There existed a negative correlation between control and challenge that was not significant. It may be theorized that the more control an individual has over a life situation the less challenged he will feel toward it. The less control an

individual perceives over a situation the more challenged s/he will feel.

The second hypothesis was hardiness will have an inverse relationship to stress. There existed a positive correlation that is not significant. The results supported a relationship between hardiness and stress that was positive. An inverse relationship was not supported. Hardy individuals do not experience life events that are qualitatively different from those experienced by non-hardy individuals, but they are more likely to perceive the events they do experience as positive and under their complete control. Effect size is concerned with the strength of relationships among research variables. While a modest relationship may in fact exist between hardiness and stress the small sample used may not be adequate to demonstrate the relationship statistically.

The third hypothesis was hardiness will be positively related to the evaluation of personal stressor's as challenging. There is a positive correlation that is not significant. The individual with the psychological characteristic of hardiness does not perceive change as a threat to security but allows the individual to be a catalyst in his environment. They perceive increasing stress as a challenge for personal and professional growth rather than as a threat. Hardy individuals use more positive self-statements than other individuals (Allred & Smith, 1989). These results are consistent with the view

that the personality characteristic of hardiness may moderate the effects of stress by way of cognitive processes. The lack of significance is attributed to sample size and therefore a Type II error.

Summary

It was hypothesized that commitment, control, and challenge comprised the personality style of stress resistance labeled as hardiness by Kobasa (1979). Hardiness is defined as a personality trait that serves as a buffer in the stress reaction and thereby lessens the symptoms that result from exposure to stress. They believe that they have personal control and can influence events in their lives. These persons have decisional control in that they are capable of choosing among alternative means to handle stress. They have cognitive control in that they can interpret, appraise, and incorporate stressful events into their plan of life rather than becoming very upset by such events. Hardy individuals also have a great repertoire of coping skills, which is characteristic of their motivation to achieve in all situations.

Hardy individuals are able to feel deeply committed or involved in activities of daily living. Committed persons have an inherent ability to change their perceptions of stressors to minimize personal threat. These persons have the ability to recognize their goals, values, and priorities. They have an appreciation of the capacity to have goals and to make accurate appraisals of events. Hardy

persons also feel committed and involved with others, which provides the basis for social support. They see changes as exciting and challenges to further development. They value a life that is filled with change and have explored their environment to identify resources that aid them in stressful situation.

As a constellation of three personality characteristics (control, commitment, and challenge), hardiness facilitates the kind of perception, coping, and evaluation that is necessary for the successful resolution of events created by stressful stimuli, which thereby prevents the debilitation that results from continuous demands for adaptation. Further study is needed to verify that hardiness is a stress mediator in nursing and to determine how to best promote hardiness in nurses.

Commitment and Stress

Commitment means that the individual knows who s/he is and what s/he is doing throughout life situations. S/he experiences the belief that there is truth, importance, and value to his or her existence. This individual involves themselves fully in various life experiences and relationships with comfort. Commitment serves as a buffer to stress since it provides an overall sense of purpose that mitigates the perceived threats of various life events. The committed individual recognizes the value of life and personal interactions with the environment. There is insight into both her/his value system and her/his decision

making process. This self-understanding is a source of support and revitalization. The value of the support of others is also recognized by the committed individual. Therefore, s/he can comfortably elicit help in stressful situations. S/he will also make her/his coping skills available to others experiencing stress (Kobasa, Maddi, & Courington, 1981).

Control and Stress

An individual possessing control believes and acts as if he or she is able to influence life's course of events. S/he perceives stressful events as predictable consequences of her/his own activity, thus s/he maintains the ability to manipulate the situation. S/he acknowledges her/his own responsibility her/his life's management rather than seeing events as the result of the actions of others or fate. There is a feeling of control even when there is no discernible cause-effect relationship identified since the individual recognizes that s/he is capable of effective functioning regardless of the situation. Such an individual would be defined as having an internal locus of control (Kobasa et al., 1981).

Challenge and Stress

When it is believed that change, not stability, is the normative mode of life, challenge is evident. The individual views stressful events as opportunities and incentives for personal growth. Since change is not a perceived threat to security the individual can be a

catalyst in her/his environment. S/he possesses cognitive flexibility and is open to others. Finally, ambiguity can be tolerated. With challenge there is a search for new and interesting experiences that potentially add to the possibility of stressful life events. This individual has, however, explored her/his surroundings and knows where stress reduction resources can be found (Kobasa et al., 1981).

Implications for Further Research

The majority of the research has been done on white, male executives. The research that has been done on nurses has focused on those nurses in the acute care setting. This study should be replicated to include a much larger sample to determine if the findings are similar to the small homogeneous group. Research should be broadened to include the advanced practice nurse, particularly because of perceived stress levels inherent in the role, and then to expand the study to compare the advanced practice nurse to the graduate nurse. Another consideration could be to research the nurse at the graduate level and then re-investigate after entering the role of the advanced practice nurse. One could also study a group of nurses who had undergone education to increase their levels of hardiness and then compare that to a control group of nurses who had not received the hardiness training. Additional research could include comparison of nurses with studies of individuals in other professional roles.

The focus of nursing on identified practice issues and burnout has been in the area of stress reduction. The content and process of role implementation are important issues for the individual practicing in an advanced nursing role. The role of the nurse in advanced practice is not well understood in that nurses themselves are not always clear about their roles and are, therefore, allowing the system to use them inappropriately at times.

Role conflicts and role negotiations are a way of life for the APN working in primary care. We can expect to expend considerable energy trying to get physicians, other providers, legislators, and the public to understand who we are and what we have to offer. Those who serve as role models, as faculty and preceptors, must help prepare our students for the problems inherent in role change. In order to obtain and utilize power, the nurse must gain access to a number of external and internal resources to add to his or her own strengths. We must accept that our daily practice will be filled with challenges that can expand our professional growth in a positive manner. Empowerment enables nurses to participate in actions and decision-making within a context that supports an equitable distribution of power. Empowerment requires a commitment to connection between self and others enabling individuals or groups to recognize their own strengths, resources, and abilities to feel challenged by change and to feel control over facilitating a response to that change.

Why should nurses devote research time and energy to hardiness? Both in studies of patients and themselves, nurses place a high premium on the presence of individuals who do well under stress, the importance of positive and active assumptions about personality, and the need to recognize the environmental demands or stressors placed upon people. For example, faced with increasing dehumanization within the high-tech medical setting, it is critical for nurses to ensure that the individual needs and differences of patients are recognized. Also nurse's interest in hardiness needs to be understood in terms of longstanding struggles within the profession. Drawing from a paper by Fox, Aiken, and Messikomer (1990) on the culture of nursing, the attention given to hardiness has much to do with nurses' attempts to distinguish their identity as health care professionals.

Fox and her colleagues describe the nursing community as intent on revealing and legitimizing its own principals and practices of caring for patients. Hardiness may be a useful tool in this endeavor. Both in its general characterization as part of peoples' essential and strenuous search for meaning and in its more specific description as a composite of commitment, control, and challenge, hardiness may be well suited to nurses' drive to distinguish their field from the profession of medicine by which it has been historically dominated. Consider nurses' understanding of current professional crisis, which is characterized by

burnout, ethical issues regarding restructuring and managed care, and the day to day demands of practice. The loss of control nurses feel is particular: It is not simply a matter of lacking power over others but rather control over their ability to care for patients in a manner consistent with their deeply held values. This view of control is easily linked with the hardiness definition that makes control part of a triad that also includes commitment and challenge (Kobasa, 1982).

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Appendix A

Personal Views Survey

Below are some items with which you may agree or disagree. Please indicate how you feel about each one by using the provided scoring sheets. Completely fill in a circle from 1 to 4 in the space provided. A one indicates that you feel the item is not at all true; choosing four means that you feel the item is completely true.

As you will see, many of the items are worded very strongly. This is to help you decide the extent to which you agree or disagree.

Please read all the items carefully. Be sure to answer all on the basis of the way you feel now. Don't spend too much time on any one item.

- 1 = Not at all true
- 2 = A little true
- 3 = Quite a bit true
- 4 = Completely true

1. I often wake up eager to take up my life
where it left off the day before 1 2 3 4
2. I like a lot of variety in my work 1 2 3 4
3. Most of the time, my bosses or superiors
will listen to what I have to say 1 2 3 4
4. Planning ahead can help avoid most future
problem 1 2 3 4
5. I usually feel that I can change what might
happen tomorrow, by what I do today 1 2 3 4
6. I feel uncomfortable if I have to make any
changes in my everyday schedule 1 2 3 4
7. No matter how hard I try, my efforts will
accomplish nothing 1 2 3 4
8. I find it difficult to imagine getting
excited about working 1 2 3 4
9. No matter what you do, the "tried and true"
ways are are always the best 1 2 3 4
10. I feel that it's almost impossible to change
my spouse's/significant other's mind about
something 1 2 3 4

11. Most people who work for a living are just manipulated by their bosses 1 2 3 4
12. New laws shouldn't be made if they hurt a person's income 1 2 3 4
13. When you marry and have children you have lost your freedom of choice 1 2 3 4
14. No matter how hard you work, you never really seem to reach your goals 1 2 3 4
15. A person whose mind seldom changes can usually be depended on to have reliable judgment . . 1 2 3 4
16. I believe most of what happens in life is just meant to happen 1 2 3 4
17. It doesn't matter if you work hard at your job, since only the bosses profit by it anyway 1 2 3 4
18. I don't like conversations when others are confused about what they mean to say 1 2 3 4
19. Most of the time it just doesn't pay to try hard, since things never turn out right anyway 1 2 3 4
20. The most exciting thing for me is my own fantasies 1 2 3 4
21. I won't answer a person's questions until I am very clear as to what he is asking . . . 1 2 3 4
22. When I make plans I'm certain I can make them work 1 2 3 4
23. I really look forward to my work 1 2 3 4
24. It doesn't bother me to step aside for a while from something I'm involved in, if I'm asked to do something else 1 2 3 4
25. When I am at work performing a difficult task I know when I need to ask for help . . 1 2 3 4
26. It's exciting for me to learn something about myself 1 2 3 4
27. I enjoy being with people who are predictable 1 2 3 4

28. I find it's usually very hard to change
a friend's mind about something 1 2 3 4
29. Thinking of yourself as a free person just
makes you feel frustrated and unhappy . . . 1 2 3 4
30. It bothers me when something unexpected
interrupts my daily routine 1 2 3 4
31. When I make a mistake, there's very little
I can do to make things right again 1 2 3 4
32. I feel no need to try my best at work, since
it makes no difference anyway 1 2 3 4
33. I respect rules because they guide me . . . 1 2 3 4
34. One of the best ways to handle most problems
is just not to think about them 1 2 3 4
35. I believe that most athletes are just born
good at sports 1 2 3 4
36. I don't like things to be uncertain or
unpredictable 1 2 3 4
37. People who do their best should get full
financial support from society 1 2 3 4
38. Most of my life gets wasted doing things
that don't mean anything 1 2 3 4
39. Lots of times I don't really know my own
mind 1 2 3 4
40. I have no use for theories that are not
closely tied to facts 1 2 3 4
41. Ordinary work is just too boring to be
worth doing 1 2 3 4
42. When other people get angry at me, it's
usually for no good reason 1 2 3 4
43. Changes in routine bother me 1 2 3 4
44. I find it hard to believe people who tell
me that the work they do is of value to
society 1 2 3 4
45. I feel that if someone tries to hurt me,
there's usually not much I can do to try
and stop him 1 2 3 4

46. Most days, life isn't very exciting for
me 1 2 3 4
47. I think people believe in individuality only
to impress others 1 2 3 4
48. When I'm reprimanded at work, it usually
seems to be unjustified 1 2 3 4
49. I want to be sure someone will take care of
me when I get old 1 2 3 4
50. Politicians run our lives 1 2 3 4

Scoring Instructions for Personal Views Survey

1. Challenge items = 2, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 37, 40, 43, 46, and 49

Commitment items = 1, 8, 11, 14, 17, 20, 23, 26, 29, 32, 38, 39, 41, 44, 47, and 50

Control items = 3, 4, 5, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34, 35, 42, 45, and 48
2. Items to be reversed: 6-21 and 27-50
3. For challenge score, sum over all relevant items and divide by 51
For commitment score, sum over all relevant items and divide by 48
For control score, sum over all relevant items and divide by 51
4. To create Hardiness composite, take three ratio scores, add together, multiply by 100, and divide by three.

Nursing Stress Scale

This questionnaire contains a list of situations that commonly occur in nursing environments. For each item indicate by filling in the appropriate number how often in your environment you have found the situation to be stressful.

Note that some of the items appear to be quite similar. However, each statement describes a different aspect of your work that may be stressful. Please respond to each item independently, even though some may be similar. Your responses are strictly confidential.

- 1 = never
- 2 = occasionally
- 3 = frequently
- 4 = very frequently

1. Breakdown of the computer 1 2 3 4
2. Criticism by a physician 1 2 3 4
3. Performing procedures which patients
experience as painful 1 2 3 4
4. Feeling helpless in the case of a patient
who fails to improve 1 2 3 4
5. Conflict with a supervisor 1 2 3 4
6. Listening or talking to a patient about
his/her approaching death 1 2 3 4
7. Lack of an opportunity to talk openly with
other unit personnel about problems on the
unit 1 2 3 4
8. The death of a patient 1 2 3 4
9. Conflict with a physician 1 2 3 4
10. Fear of making a mistake in treating a
patient 1 2 3 4
11. Lack of an opportunity to share experiences
and feelings with other personnel on the
unit 1 2 3 4
12. The death of a patient with whom you
developed a close relationship 1 2 3 4

- | | | | | |
|--|---|---|---|---|
| 13. Physician not being present when a patient dies | 1 | 2 | 3 | 4 |
| 14. Disagreement concerning the treatment of a patient | 1 | 2 | 3 | 4 |
| 15. Feeling inadequately prepared to help with the emotional needs of a patient's family | 1 | 2 | 3 | 4 |
| 16. Lack of an opportunity to express to other personnel on the unit my negative feelings towards patients | 1 | 2 | 3 | 4 |
| 17. Inadequate information from a physician regarding the medical condition of a patient | 1 | 2 | 3 | 4 |
| 18. Being asked a question by a patient for which I do not have a satisfactory answer | 1 | 2 | 3 | 4 |
| 19. Making a decision concerning a patient when the physician is unavailable | 1 | 2 | 3 | 4 |
| 20. Floating to other units that are short staffed | 1 | 2 | 3 | 4 |
| 21. Watching a patient suffer | 1 | 2 | 3 | 4 |
| 22. Difficulty working with a particular nurse (or nurses) outside the unit | 1 | 2 | 3 | 4 |
| 23. Feeling inadequately prepared to help with the emotional needs of a patient | 1 | 2 | 3 | 4 |
| 24. Criticism by a supervisor | 1 | 2 | 3 | 4 |
| 25. Unpredictable staffing and scheduling | 1 | 2 | 3 | 4 |
| 26. A physician ordering what appears to be inappropriate treatment for a patient | 1 | 2 | 3 | 4 |
| 27. Too many non-nursing tasks required, such as clerical work | 1 | 2 | 3 | 4 |
| 28. Not enough time to provide emotional support to a patient | 1 | 2 | 3 | 4 |
| 29. Difficulty in working with a particular nurse (or nurses) on the unit | 1 | 2 | 3 | 4 |
| 30. Not enough time to complete all of my nursing tasks | 1 | 2 | 3 | 4 |

31. A physician not being present in a medical
emergency 1 2 3 4
32. Not knowing what a patient or a patient's
family ought to be told about the
patient's medical condition and its
treatment 1 2 3 4
33. Uncertainty regarding the operation and
functioning of specialized equipment 1 2 3 4
34. Not enough staff to adequately cover the
unit 1 2 3 4

Appendix B

MICHIGAN STATE UNIVERSITY

June 26, 1997

TO: Louise Selanders
A-230 Life Sciences Bldg.

RE: IRB#: 97-408
TITLE: HARDIENSS: ITS RELATIONSHIP TO STRESS IN NURSES
REVISION REQUESTED: N/A
CATEGORY: 1-C
APPROVAL DATE: 06/25/97

The University Committee on Research Involving Human Subjects (UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project and any revisions listed above.

RENEWAL: UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must use the green renewal form (enclosed with the original approval letter or when a project is renewed) to seek updated certification. There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

REVISIONS: UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please use the green renewal form. To revise an approved protocol at any other time during the year, send your written request to the UCRIHS Chair, requesting revised approval and referencing the project's IRB # and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.



OFFICE OF RESEARCH AND GRADUATE STUDIES

University Committee on
Research Involving
Human Subjects
(UCRIHS)

Michigan State University
246 Administration Building
East Lansing, Michigan
48824-1046

517/355-2180
FAX: 517/432-1171

PROBLEMS/ CHANGES:

Should either of the following arise during the course of the work, investigators must notify UCRIHS promptly: (1) problems (unexpected side effects, complaints, etc.) involving human subjects or (2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

If we can be of any future help, please do not hesitate to contact us at (517) 355-2180 or FAX (517) 432-1171.

Sincerely,

David E. Wright
David E. Wright, Ph.D.
UCRIHS Chair

DEW:bed

cc: Laurie Porter

The Michigan State University
IDEA is Institutional Diversity
Excellence in Action

MSU is an affirmative action

MAY 29 1997

Laurie Porter R.N.
7663 Thorpe Rd.
Bear Lake, Michigan
49814
1-616-889-3654

Dear Michigan State Student:

As a graduate student at Michigan State University, I am completing a research study in partial fulfillment of the requirements for the degree of Master of Science in Nursing. I am investigating the relationship of certain personality characteristics to stress in nurses.

I would like to invite you to participate in this research endeavor. Because stress is known to be prevalent among nurses, this study has the potential to contribute to the facilitation of learning and thus to the delivery of optimal patient care. I am asking you to participate because you are a graduate nursing student pursuing a Master's degree.

Your involvement in this project will consist of completing two questionnaires, one to measure the frequency and identify the sources of stress for nurses, and the other to measure the degree of hardiness in nurses. You will also complete a short list of personal data items. It will take approximately 25 minutes to complete the process. Specific directions precede each section.

All results will be treated with strict confidence and subjects will remain anonymous in any report of research findings; on request and within these restrictions results may be made available to subjects in the form of a completed thesis, abstract, or derived publication. The number code noted on your questionnaire is a subject code to help the researcher track data returns, but does not identify you. Please do not write your name on any part of the returned survey.

You indicate your voluntary agreement to participate by completing and returning the research packet. Place the completed information in the provided stamped envelope, seal it, and return by _____. Questions concerning this research project or the questionnaires may be directed to either of the individuals indicated at the bottom of this letter.

Thank you for your contribution to this important research project.

Sincerely,

Laurie Porter

Louise Selanders, RN, EdD, Supervisor
A217C Life Sciences
15811 Upton Road
East Lansing, MI 48823
1-616-343-9196

Laurie Porter, RN, Researcher
7663 Thorpe Road
Bear Lake, MI 49814
1-616-889-3654

UCRIHS APPROVAL FOR
THIS project EXPIRES:

JUN 25 1998

SUBMIT RENEWAL APPLICATION
ONE MONTH PRIOR TO
ABOVE DATE TO CONTINUE

Laurie Porter R.N.
7663 Thorpe Rd.
Bear Lake, Michigan
49614
1-616-889-3654

Dear Michigan State Student:

As a nursing graduate student at Michigan State University, I am completing a research study in partial fulfillment of the requirements for the degree of Master of Nursing Science. I am investigating the role of the personality characteristic of hardiness and its relationship to stress within the nursing profession.

I would like to invite you to participate in this research endeavor. Because stress is known to be prevalent among nurses, this study has the potential to contribute to the facilitation of learning and to the delivery of optimal patient care. I am asking you to participate because you are a graduate nursing student, pursuing a Master's degree.

Your involvement in this project will consist of completing a two part questionnaire to measure the frequency and identify the sources of stress in nurses, and to measure the degree of hardiness in nurses. You will also complete a short list of personal data items. It will take approximately 25 minutes to complete the process. Specific directions will precede each section.

I will be happy to answer any questions that you may have or that occur during the completion of the questionnaire. I ask that you replace the two scoring sheets and the demographic sheet in the smaller envelope. Please seal it and return no later than September 11, 1997. Please do not write your name on any portion of the scoring sheets, demographic sheet, or smaller envelope.

Thank you for your contribution to this study. A copy of results of this study will be available to you upon completion, as a thesis, within the College of Nursing, at Michigan State University.

Sincerely,

Laurie Porter

Appendix C

7742 Traders Cove Lane
Indianapolis, IN 46254

March 12, 1997

Alan Burns

Please find enclosed a copy of the **Nursing Stress Scale** that you requested. I would request that you give the authors the appropriate recognition, and that you would send me a copy of the results of your study when you are finished.

A couple of points regarding scoring:

- Scores for each subscale are calculated by summing the responses for all items within the subscale, and then dividing by the number of items.
- Any changes to the original instrument would necessitate a factor analysis or an intuitive analysis for subscale definition.

Good luck on your research.

Sincerely,

Pam Toft

Pam Toft

Appendix D



THE
GRADUATE SCHOOL
AND
UNIVERSITY CENTER

PH.D. PROGRAM IN PSYCHOLOGY

33 WEST 42 STREET, NEW YORK, NY 10036-8099
212 642-2504

THE CITY UNIVERSITY OF NEW YORK

Date:

4/20/97

Dear

Louise Porter

I am granting you permission to use the instrument, Personal Views Survey, as the measurement for the concept of hardiness in your research. Enclosed is the instrument that we are currently using in our studies in New York and the instructions for scoring. I have included several articles which provide a concept analysis of hardiness and a critique of the various hardiness instruments. For additional information about the construct and its measurement, please consult a recent chapter I contributed to L. Goldberger & S. Breznitz (Eds.) (1993). Handbook of stress: Theoretical and clinical aspects. 2nd edition. New York: Free Press. As you will find in the chapter, I feel quite strongly that (a) improvements are needed in the scale and (B) other types of measurement approaches to hardiness need to be developed. Our group is currently working on both these tracks.

I would suggest that before selecting the Personal Views Survey that you review the literature and evaluate the reported reliabilities of the instrument both as a total scale score and its subscales, particularly with reference to the specific sample of your study. At this point in time, the use of a total score for hardiness has demonstrated greater consistency across samples. To further support your selection of this instrument, it is further recommended that you conduct a pilot study based on your specific sample to evaluate the reliability of the instrument. A Cronbach alpha of .70 or greater demonstrates acceptable reliability of the instrument.

I would appreciate your help in the further development of this instrument. Therefore, it is requested that upon completion of your pilot study or thesis that you submit an abstract of your study including a description of the sample and sample size, and the statistics related to the reliability of the instrument. If you have any suggestions for new items, item rewording or interview questions to tap hardiness, your feedback would be appreciated. I look forward to hearing from you about your work.

Sincerely,

Suzanne Ouellette
Suzanne Ouellette (formerly, Kobasa), Ph.D.

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