HARDINESS, COPING STYLE, AND BURNOUT: RELATIONSHIPS IN
FEMALE HOSPITAL NURSES

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By
Phylann S. Fusco, B.S., M.A.
Denton, Texas
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This study investigated relationships among and between psychological hardiness, coping style, and burnout in 101 female hospital nurses. The third generation (50-item) hardiness scale, scored by the revised scoring procedure, was used to measure hardiness and its components. The Maslach Burnout Inventory was used as the measurement for burnout. Coping style was assessed by the COPE Inventory. The components of hardiness, commitment, control, and challenge, were hypothesized to be negative predictors of emotional exhaustion and depersonalization and positive predictors of personal accomplishment. In addition, hardiness and its components were postulated to be positively related to adaptive coping styles and negatively related to maladaptive coping styles. Emotional exhaustion and depersonalization were thought to be related positively to maladaptive coping styles and negatively related to adaptive coping styles. Personal accomplishment was thought to be positively related to adaptive coping style and negatively related to maladaptive coping style. Simple and multiple regressions were used.
As expected, commitment, control, and challenge were found to be negative predictors of emotional exhaustion and depersonalization and positive predictors of personal accomplishment. Commitment accounted for the largest portion of the variance in each component of burnout. Significant positive correlations were found between hardiness and its components and coping styles which actively attempt to solve or alter stressful situations. Coping styles which attempt to minimize stressful situations without actually resolving them showed significant negative correlations with hardiness and its components. The relationships among hardiness, its components, and coping style are supportive of Kobasa’s conceptualization of hardy individuals as active, goal-oriented people who see themselves as persons who can do something constructive about the stressful situations they encounter. Overall, the components of burnout appear unrelated to coping style. Only two maladaptive coping styles showed significant positive correlations with emotional exhaustion and depersonalization. Personal accomplishment showed significant positive relationships with the same coping styles found to be positively related to hardiness or its components.
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CHAPTER I
INTRODUCTION

Professional literature on stress emphasizes several important findings: (a) stress is defined differently by different researchers (Dohrenwend, 1986; Janis, 1986; Lazarus, 1986; Meichenbaum, 1986; Selye, 1976), (b) stress can be a positive or a negative occurrence (Selye, 1974), (c) the perception of an event as stressful is subjective (Breznitz, 1986; Katkin, 1986; Lazarus, 1966), (d) some people mediate potentially stressful events more effectively than others (Antonovsky, 1979, 1987; Kobasa, 1979), and, (e) continued stress can lead to negative physical and psychological outcomes (Dohrenwend & Dohrenwend, 1974; Gentry & Kobasa, 1984; Rabkin & Struening, 1976; Selye, 1976). Thus stress is a complex, highly subjective experience that can have either positive or negative effects depending upon how an individual perceives and responds to the event or situation.

Though stress can pervade many areas of an individual's life, job stress represents a significant part of the stress experienced by individuals. In a recent survey of over 500 male and female employees, conducted by Research and Forecast, Inc., 1 in 5 reported the predominant source of stress experienced was related to work (Zemke, 1991).
Unrelenting occupational stress can have serious harmful effects on an individual's physical and psychological health, as well as serious depressing effects on an individual's job performance.

Personal costs of job stress have been reported to include divorce, substance abuse, emotional disruption, and loss of health (Kahill, 1988). A notable portion of the cost of job stress for employers is the monetary cost of medical expenses resulting from stress-related disorders. Between 1980 and 1986 workers compensation claims related to stress tripled (Grippa & Durbin, 1986); and losses to the US economy associated with job stress were estimated to exceed $150 billion per year (Freudenberg, 1987).

Although this is a substantial amount, the real costs of job stress may be much higher. Estimates of the economic costs of stress-related losses are complicated by the fact that most of the true costs are never reflected in a dollar measurable form. While depression and exhaustion can be found in workers in high-stress jobs, these conditions are often not severe enough to result in hospitalization or even a prescription (Karasek & Theorell, 1990). Though their illnesses may not lead to an economically measurable health care cost, exhausted or depressed employees may lack energy, accuracy, or innovation at work. These employee problems may result in opportunity costs associated with loss of quality and productivity for the organization (Edelwich &
Brodsky, 1980; Freudenberger, 1980; Ivancevich & Matteson, 1980; Matteson & Ivancevich, 1982; Patrick, 1981). Additionally, as workers experience job stress, they engage in absenteeism, tardiness, sabotage, intrastaff conflicts, requests for transfers, and eventually, turnover and/or permanent severance from the practice of their profession (Matteson & Ivancevich, 1987; Pines, Aronson, & Kafry, 1981).

The term burnout is commonly used in career literature, stress literature, and popular literature to describe the later stages of the negative process of experiencing continued occupational stress (Cherniss, 1980; Cronin-Stubbs & Rook, 1985; Freudenberger, 1974; Golembiewski & Munzenrider, 1988; Jones, 1980; Ivancevich & Matteson, 1980; Maslach, 1982; Matteson & Ivancevich, 1982, 1987; Pines & Aronson, 1988). While the literature is fraught with disagreement and confusion over the definition and measurement of this construct, most investigators of burnout agree that burnout is a negative reaction to occupational stress (Herr & Cramer, 1992) which may affect workers in a variety of occupations such as education, banking, industry, postal service and health service (Matthews, 1990).

Although burnout affects many professions, it is of special relevance in the helping professions, perhaps most notably nursing. According to Cherniss (1980) burnout undermines the personal relationship between caregiver and
recipient that is essential for effective service. Because of the involvement with patients, family, and peers as well as a work environment that includes frequent crises, excessive workload, role conflicts, minimal control and decision making, nurses are especially prone to burnout (Kunkler & Whittick, 1991; Maslach, 1982; Maslach & Jackson, 1982; Pines & Aronson, 1988). Furthermore, the mounting stressors of caring for sicker patients (i.e., organ recipients, trauma victims, persons with AIDS) with more impersonal technologies during decreasing lengths of stay, compound the long-standing traditional problems associated with nursing (i.e., scheduling, floating between work units, shift rotation, lack of autonomy, and strained physician-nurse relationships) making nurses even more prone to burnout (Foxall, Zimmerman, Standley, & Bene, 1990; Hall & Stevens, 1991; McKibbon, 1990).

There are important reasons why burnout in nursing should not be overlooked. Burnout may greatly influence job retention and turnover (Firth & Britton, 1989; Wandelt, Pierce, & Widdowson, 1981). Hospitals, where two-thirds of all registered nurses and one-quarter of all licensed vocational nurses work, are hard hit by turnover (Adams, 1990; McKibbin, 1990). In 1987, the American Hospital Association conducted a survey of all hospitals in the United States. The response to the survey was just over 90% (Adams, 1990). This survey showed the turnover rate for
registered nurses was 18.7%, while the turnover rate for licensed vocational nurses was slightly lower at 15%. This means that essentially one out of every five registered nurses terminated employment in a hospital in the previous year; slightly fewer licensed vocational nurses terminated their employment (Adams, 1990). The registered nurse vacancy rate in the responding hospitals was 10.6% in December 1988 and 12.7% in 1989 (Adams, 1990; McKibbin, 1990) meaning that approximately one out of every eight nursing positions was unfilled.

Nursing turnover has both financial and human resources implications. The economic costs associated with nursing turnover have been estimated in the literature to range from as low as $1,280 to as high as $50,000 per Registered Nurse (Jones, 1990). However, these figures may be artificially low because they often reflect only the direct costs of hiring and orienting new staff members. Indirect costs such as advertising, travel, public relations, nurse recruiter fees, and orientation costs of replacement employees are frequently excluded in nursing turnover cost estimates. From a human resources perspective turnover may lead to a decrease in the quality of patient care (Jones, 1990). Nurses form one of the most important health care delivery resources. The inability to provide adequately the services that are the foundation of a health care organization is not just a professional resource issue but an issue of financial

Just as retention is a major problem in the nursing profession, recruitment into the profession may also be affected by burnout. Nursing competes with non-health related fields for recruits. Persons who might have once considered entering nursing may be more likely to select a profession that does not have the disadvantages assumed to be associated with a career which offers heavy workloads, inequitable pay scales, rigid hierarchical structure, and limited upward mobility. The continuing demand for nurses combined with decreasing enrollment in nursing schools has led to predictions that the current supply-demand imbalance will continue far into the future (Dvorak & Waymack, 1991).

The increasing need to combat burnout and the growing consensus that occupational stress is a factor in burnout, have spurred investigation of factors inherent in the workplace that may serve as sources of potential stress. Physical working conditions, shift work, work pace, work overload, work underload, physical danger, person-environment fit, lack of supervisor support, lack of participation in decision-making, and ongoing contact with
stress carriers (e.g., highly demanding individuals, indecisive individuals, highly anxious individuals) are sources of stress inherent in most occupations (Davidson & Cooper, 1981; Herr & Cramer, 1992; Matteson & Ivancevich, 1987), but particularly in nursing (Caldwell & Weiner, 1981; Dear, Weisman, Alexander, & Chase, 1982; Foxall et al., 1990; Numeroff & Abrams, 1984).

Researchers (Boyce, Schaefer, & Uitti, 1985; Kobasa, 1979, 1982a, 1982b; Moos, 1984; Reiss, 1981; Werner & Smith, 1982) also investigated variables that serve as resources that may increase stress resistance or buffer stressful events. This line of inquiry derives from Antonovsky's (1979, 1987) speculation regarding salutogenesis, the origin of health, and the proposition that certain factors, termed resistance resources, may buffer or neutralize the otherwise debilitating effects of stressful life events. Resistance resources are considered any characteristic of a person, group, or environment that facilitate tension management. Cultural context, social support, physiological adaptability, and personality are stress resistance resources found to have a buffering effect on occupational stress (Topf, 1989).

A major personality factor found to serve as a resistance resource for stress is hardness. The term hardness, introduced by Kobasa (1979), is defined as a personality disposition that facilitates the type of coping
that leads to successful resolution of stressful situations (Kobasa, Maddi, & Kahn, 1982). In theory, hardy individuals are thought to share three personality characteristics: (a) a sense of commitment to self and to work, (b) perceptions of control over one's environment, and (c) the tendency to approach life change with an attitude of challenge rather than threat (Kobasa, 1979). The buffering effect of hardiness is postulated to occur through the process of transformational coping or the ability to render stressors more meaningful, less overwhelming, and less undesirable (Kobasa, et al., 1982) thus reducing the impact of those stressors.

Hardiness can be measured by a self-report, paper and pencil survey containing anywhere from 20 to 71 items. Several authors (Carver, 1989; Funk & Houston, 1987; Hull, Van Treuren, & Virnelli, 1987; Parkes & Rendall, 1988), have criticized the early versions of the hardiness instrument. These criticisms centered on the use of negative definitions, such as powerlessness and lack of security, to measure the presence of hardiness. A third generation 50-item hardiness instrument (Hardiness Institute, 1985), developed from factor analyses of the original scales, seems to overcome the most significant shortcomings, namely unidirectionality and negative indication, mentioned by hardiness critics (Orr & Westman, 1990). Furthermore, the revised 50-item version of the hardiness instrument is
phrased with a broader social context in mind rather than the limited context of executive work.

The revised hardiness instrument indicates hardiness by a total score derived by combining the scores from the three subscales. Although combining the three subscale scores to create a hardiness composite score has been criticized as an inappropriate measure of what is considered a tripartite construct (Carver, 1989; Hull et al., 1987), the practice is recommended by the Hardiness Institute (S. Dane, personal communication, March 1992) and supported by the research of Orr and Westman (1990). Prudent research would utilize both composite hardiness and individual component scores. Despite the recommendations this scale be used for research (Orr & Westman, 1990), few published studies using the revised 50-item version of the hardiness instrument were found by this investigator.

Though the investigation of hardiness has been primarily related to its buffering effects on stressful life events and illness (Kobasa, 1979; Kobasa 1982a; Kobasa, 1982b; Kobasa, Maddi, & Courington, 1981; Kobasa, et al., 1982; Kobasa, Maddi, Puccetti, & Zola, 1985; Kobasa & Puccetti, 1983; Lee, 1983; Pollock, 1986), there is a modest amount of research on the moderating effects of hardiness in relationship to occupational stress. Manning, Williams, and Wolfe (1988) found that hardy individuals in both insurance and manufacturing industries reported higher levels of job
satisfaction and fewer tensions at work than did less hardy individuals. Similar results were found in the human service field (Nowack and Hanson, 1983) and in female teachers (Holt, Fine, & Tollefson, 1987). Research data also support the idea that hardiness may be an important personality-based resistance resource for preventing burnout among hospital nurses (Boyle, Grap, Younger, & Thornby, 1991; Keane, Ducette, & Adler, 1985; McCranie, Lambert, & Lambert, 1987; Rich & Rich, 1987).

While the above cited studies show hardiness has a significant main effect on burnout in nurses, research exploring how hardiness operates in lowering psychological stress is limited. Kobasa, Maddi, and Kahn (1982) intimated that personality hardiness mitigates the negative effect of stressful life events by influencing both cognitive appraisal (e.g., not interpreting events as meaningless, overwhelming, or undesirable) and coping (e.g., instigating activities that lead to an effective resolution of problems caused by the stressful events). Four published studies were found that tested the idea that hardiness buffers stress by altering the perception of the potential stressful event (Banks & Gannon, 1988; Orr & Westman, 1990; Rhodewalt & Agustsdottir, 1984; Weibe, 1991).

In a study of male and female students (N = 90) on the impact of hardiness, life events, and hassles on reports of somatic symptoms, Banks and Gannon (1988) found hardy
individuals reported fewer life events and hassles than did those lower in hardiness. Furthermore, hardy individuals tended to rate hassles, but not life events, as less severe than did lower hardy individuals. These results suggest that hardy individuals may be less inclined to notice troublesome situations or difficulties at work. Thus, hardiness may be interpreted in the context of the cognitive-perceptual framework of Lazarus and Folkman (1984) which would suggest hardiness operates in part as a beneficial style of appraising stressful events (Banks & Gannon, 1988).

In another study of male and female students \((N = 600)\), Rhodewalt and Agustsdottir (1984) found high hardy students reported a higher percentage of life events as positive. Additionally, these high hardy individuals were more likely to perceive they had complete control over a greater number of their life events. Similarly, Orr and Westman (1991) noted that hardiness was related to fewer experiences appraised negatively, but not to those experiences positively appraised.

In a like vein, Weibe (1991) found male and female undergraduates \((N = 820)\) high in hardiness displayed higher frustration tolerance to an evaluative threat than did low hardy undergraduates. Moreover, the high hardy students appraised tasks as less threatening and responded to the task with more positive and less negative affect than did
the low hardy students. These findings lend support to the idea that hardiness influences people’s perception or cognitive appraisal of events.

The second part of Kobasa et al.’s (1982) speculation regarding how hardiness works, transformational coping, has received limited attention in the literature. Published studies imply that hardiness mitigates psychological stress through the utilization of effective coping skills (Holt et al., 1987; Kobasa, 1982a; Rich & Rich, 1987); however, actual research investigating the relationship between coping and hardiness is vague (Allred & Smith, 1989; Boyle et al., 1991; Kobasa, 1982a; Lang, 1987; Nowack, 1991; Orr & Westman, 1990). For example, Kobasa found that hardy individuals do not use regressive coping styles, i.e., avoidance or denial. Similarly, Nowack (1991), using a cognitive hardiness measure, found hardy individuals did not use an avoidant coping style. These studies serve to clarify what transformational coping is not, but do little to increase the understanding of what transformational coping is.

In an attempt to gain more specific information on the coping behaviors of hardy individuals, Boyle et al. (1991) used the Ways of Coping Checklist (Lazarus & Folkman, 1984) to investigate coping in hardy and nonhardy nurses. A negative correlation was found to exist between hardiness and emotion-focused coping, but no relationship was found
between hardiness and problem-focused coping. Other studies reported information-focused coping to be unrelated to hardiness (Orr & Westman, 1990).

Allred and Smith (1987), using an experimental design, found high hardy male students involved themselves in positive thinking more than did male students who rated lower in hardiness. Moreover, as conditions became more stressful, the hardy students engaged in even more positive thinking, while the opposite was true for the low hardy students.

Lang (1987) reported that in an intensive academic evening course, hardy students used a coping strategy of planned task management more frequently than did nonhardy students. However, Lang’s study did not investigate the relationship between coping and either physical or psychological health. This is a significant drawback.

Purpose of the Study

Published literature addressing the relationship of hardiness and coping to burnout in nurses seems hampered by two major problems. First, the research investigating the relationship among these concepts seems extremely limited. Second, though Boyle et al. (1991) used a questionnaire to measure coping, rather than the dominant methodology of asking open-ended questions which are then content-analyzed, the instrument used by these researchers provided only simplistic differentiation between problem-focused and
emotion-focused coping.

The major goal of this study was to build on previous research showing hardiness to be negatively related to burnout in nurses (Boyle et al., 1991; Keane, et al., 1985; McCranie, et al., 1987; Rich & Rich, 1987) by investigating relationships among and between hardiness, coping style, and burnout using more discriminating measures of hardiness, coping style, and burnout.

One objective of this study was to look more closely at relationships among respective components of hardiness (commitment, control and challenge) and respective components of burnout (emotional exhaustion, depersonalization, and personal accomplishment) as defined by Maslach and Jackson (1981). The assumption underlying this study was that the components of hardiness and the components of burnout are related in such a manner that the overall effect is reported lower burnout. It was theorized that a sense of commitment, might negate feelings of emotional exhaustion and depersonalization while simultaneously enhancing feelings of personal accomplishment. Similarly, a sense of control and challenge might reduce feelings of emotional exhaustion and depersonalization and increase feelings of personal accomplishment.

A second objective of this study was to uncover specific types of coping that might be associated with
hardiness and burnout in female hospital nurses. A study of burnout in hospital nurses that found hardiness was negatively related to emotion-focused coping and unrelated to problem-focused coping (Boyle et al., 1991) only partially supported Kobasa’s (1988) theory that hardiness mitigates harmful effects of stress by facilitating more appropriate methods of coping. The failure to find a connection between problem-focused coping and hardiness might have resulted from the inability of the coping measurement to identify more subtle types of problem-focused coping. To overcome this limitation, this study used the COPE Inventory developed by Carver, Scheier, & Weintraub (1989) to assess 15 different types of coping styles.

According to hardiness theory, transformational coping involves putting situations into perspective and taking action, not just to survive the situation but to grow from it. Thus, transformational coping involves both cognition and action. It was postulated that hardiness would be positively related to functional or adaptive coping styles while burnout would be positively associated with less functional or maladaptive coping styles. The identification of specific coping styles associated with both hardiness and burnout was anticipated to advance both the understanding of transformational coping and how coping style and burnout may be linked. Furthermore, studying the relationship between hardiness and coping style may provide useful information
about the use of denial by hardy individuals as a mechanism for dealing with stressful events.

Hypotheses

The following hypotheses were examined in this study:

Hypothesis 1. A low level of commitment, control, and challenge will predict Emotional Exhaustion (EE) and Depersonalization (DP).

Hypothesis 2. A high level of commitment, control, and challenge will predict Personal Accomplishment (PA).

Hypothesis 3. Composite hardiness and its individual components (commitment, control, challenge) will be positively related to coping styles of:

a.) Positive reinterpretation and growth
b.) Active coping
c.) Planning
d.) Seeking social support for instrumental reasons
e.) Acceptance
f.) Seeking social support for emotional reasons
g.) Suppression of competing activities
h.) Religion

Hypothesis 4. Composite hardiness and its individual components (commitment, control, and challenge) will be negatively related to coping styles of:

a.) Mental disengagement
b.) Behavioral disengagement
c.) Focus on and venting of emotions
d.) Denial
e.) Restraint coping
f.) Alcohol/drug use
g.) Humor

Hypothesis 5. Emotional exhaustion and depersonalization will be negatively related to coping styles of:

a.) Positive reinterpretation and growth
b.) Active coping
c.) Planning
d.) Seeking social support for instrumental reasons
e.) Acceptance
f.) Seeking social support for emotional reasons
g.) Suppression of competing activities
h.) Religion

Hypothesis 6. Emotional exhaustion and depersonalization will be positively related to coping styles of:

a.) Mental disengagement
b.) Behavioral disengagement
c.) Focus on and venting of emotions
d.) Denial
e.) Restraint coping
f.) Alcohol/drug use
g.) Humor

Hypothesis 7. Personal accomplishment will be positively related to coping styles of:

a.) Positive reinterpretation and growth
b.) Active coping
c.) Planning
d.) Seeking social support for instrumental reasons
e.) Acceptance
f.) Seeking social support for emotional reasons
g.) Suppression of competing activities
h.) Religion

Hypothesis 8. Personal accomplishment will be negatively related to coping styles of:

a.) Mental disengagement
b.) Behavioral disengagement
c.) Focus on and venting of emotions
d.) Denial
e.) Restraint coping
f.) Alcohol/drug use
g.) Humor

Significance of the Study

Successfully dealing with burnout is important in practically any work setting. However, dealing with burnout is especially important to nurses because they are engaged in an occupation that contains many pressures and potential
stressors that can never be totally eliminated (Steffon, 1980). Current nursing shortages and increasing health care needs of an aging population (McKibbin, 1990), make it vitally necessary to take steps to retain nurses currently working and to explore ways to prepare those entering the field of nursing to deal constructively with stressors inherent in the practice of hospital nursing. Furthermore, any impairment resulting from burnout that nurses experience is likely to be harmful not only to the nurses, but also to the patients being served, and the hospitals employing the nurses. Many persons have written about harmful effects of burnout for both the helper and the recipient of help (Beemsterboer & Baum, 1984; Cherniss, 1980; Edelwich & Brodsky, 1980; Firth & Britton, 1989; Freudenberger, 1974, 1977, 1980; Freudenberger & Richelson, 1980; Golembiewski & Boudreau, 1991; Golembiewski & Munzenrider, 1988; Kahill, 1988; Maslach, 1976, 1982; Maslach & Jackson, 1981, 1982, 1986; Matteson & Ivancevich, 1982; Muldray, 1983; Patrick, 1981; Pines & Aronson, 1988; Pines, Aronson, & Kafry, 1981; Pines & Maslach, 1978).

Psychological hardiness has proven to be a buffer for burnout in several different samples of nurses (Keane, et al., 1985; Lambert & Lambert, 1987; McCranie, et al., 1987; Rich & Rich, 1987). However, the body of existing research on how hardiness and coping operate to reduce burnout in hospital nurses seems negligible (Boyle, et al., 1991). The
efforts to explore the type of coping associated with hardiness and burnout are limited by the types of coping measurements available at the time of the research.

Professional literature suggests the measurement of hardiness used in the majority of research is poorly written and statistically analyzed improperly (Carver, 1989; Funk & Houston, 1987; Hull, et al., 1987; Parkes & Rendall, 1988). Though a revised version of the hardiness scale is considered by some to be a more valid measure of the construct (Orr & Westman, 1990), the 50-item scale seems to have received little attention in published hardiness research (Banks & Gannon, 1988).

The significance of this study lies in the: (a) investigation of a direct relationship among the components of hardiness and the components of burnout, (b) investigation of direct relationships between hardiness and specific coping styles, (c) discovery of data suggesting low burnout is more than just adequate coping, (d) provision of information about how hardiness and coping style are related to burnout, (e) development of hardiness programs or activities to enhance the retention of nursing personnel, and (f) potential additions to the body of knowledge about hardiness in an all female sample.

Definition of Terms

The following definitions apply to terms used in this study.
Burnout: A syndrome consisting of emotional exhaustion, depersonalization, and reduced personal accomplishment that occurs among individuals who do "people work" of some kind (Maslach & Jackson, 1986). Burnout is conceptualized as a continuous variable, ranging from low to moderate to high degrees of experienced feeling. For this study, burnout is measured by the scores obtained on the three subscales of the Maslach Burnout Inventory: Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA).

Emotional Exhaustion: Feelings of being emotionally overextended and exhausted by one's work (Maslach & Jackson, 1986).

Depersonalization: Negative, cynical attitude and impersonal response toward recipients of one's service, care, treatment, or instruction (Maslach & Jackson, 1986).

Personal Accomplishment: Feelings of competence and success in one's work with people (Maslach & Jackson, 1986).

Coping: The process through which an individual manages the demands of the person-environment relationship that are appraised as stressful and the emotions they generate (Lazarus & Folkman, 1984, p. 19).

Coping Behavior: Concrete efforts to deal with a stressful event; the specific actions taken by an individual when dealing with a stressful event.

Coping Style: A pattern of coping behaviors distinguishable over time. For this study, coping style is measured by the
COPE Inventory (Carver, et al., 1989). The COPE Inventory assesses 15 different coping styles. In addition, the COPE discriminates between adaptive and maladaptive coping styles.

**Adaptive coping style:** A coping style is considered adaptive when active coping is likely to yield good outcomes. Positive reinterpretation and growth, active coping, planning, seeking social support for instrumental reasons, acceptance, seeking social support for emotional reasons, suppression of competing activities, and religion considered adaptive coping styles (C. Carver, personal communication, March 1993).

**Maladaptive coping style:** A coping style is considered maladaptive when a more active style of coping would result in a better outcome. Mental disengagement, behavioral disengagement, focus on and venting of emotions, denial, restraint coping, and alcohol/drug use are considered maladaptive coping styles (Personal communication, C. Carver, March 1993). Because the COPE describes humor as making jokes about the situation without any action, humor is considered maladaptive in this study.

**Full-time:** Scheduled to work 32 or more hours per week.

**Hardiness:** A personality disposition that facilitates transformational coping which leads to the successful resolution of stressful situations (Kobasa, et al., 1982). Hardiness is composed of three dimensions: **commitment,**
control and challenge. For this study Hardiness is measured by the third generation hardiness instrument, the Personal Views Survey (Hardiness Institute, 1985). Both composite hardiness scores and individual component scores are reported by this tool.

Commitment: Dedication to a task, a project or a relationship that contains a strong element of realism about the level of responsibility and recognizes that the obligation is to be reevaluated if things change.

Control: The realistic knowledge of the amount of power or lack of power one possesses. This includes the appropriate use of the power possessed as well as the ability to obtain as much power as one needs for comfort or to remain committed.

Challenge: The use of commitment and control to see events, relationships, problems and opportunities as challenges rather than as threat. Challenge helps people to accept errors as errors not as personal faults.

Nurses: Females currently employed full-time or part-time within the hospital setting with the professional designation of either Registered Nurse (RN) or Licensed Vocational Nurse (LVN).

Part-time: Scheduled to work between 16-32 hours per week.

Regressive Coping: A coping process characterized by the inability to put stressful events into perspective. Stressful events are thought of pessimistically and coping
behavior is either avoidance of further contact with the event or denial of the event.

**Stress:** A universal phenomena in which an environmental stimulus is perceived as taxing a person's physiological, psychological, and sociological resources, the responses of which may be adaptive or maladaptive.

**Transformational Coping:** A coping process characterized by the ability to interact with events, to think about them confidently, and to act decisively about the events thus rendering the events less stressful.

**Assumptions**

Respondent veracity was a major assumption in this study. It was also assumed that participants did not collaborate with each other in answering the questionnaires.

**Limitations**

The sample for this study consisted of 101 nurses from one hospital in a specific geographic area. Therefore, generalization to any other group of nurses is inappropriate.

The use of volunteer participants may have resulted in self-selection bias because volunteers can easily refuse or fail to respond. Rosenthal and Rosnow (1975) recommended using a person of status to help with the recruitment of volunteers. In this study the survey packets were distributed and collected by nurse managers in an effort to limit self-selection bias.
A related limitation is direct interaction non-response bias. According to Alreck and Settle (1985) direct interaction non-response bias occurs when the things being measured affect whether or not people respond to a survey. Any of the issues being investigated in this study, hardiness, burnout, or coping style, might have affected who returned survey packets. Perhaps nurses who are low in hardiness or too burned out had less time and energy to complete survey questionnaires. Along the same lines, nurses who are not coping well with occupational stress may not have cared about participating in a research study. Thus, non-response bias due to direct interaction of the variables under investigation must be considered a limitation.

An additional limitation of this study is the use of self-report to gather information. Some respondents may not have answered some items because they didn’t know the answers, or were too embarrassed or too threatened to give an answer. Moreover it may be that the answers given by respondents were influenced by other factors such as physical or psychological health. It is notable that a substantial portion of the research on occupational stress and burnout is based on self-report measures that may be contaminated by a predisposition to low self-esteem and negative emotionality (Brief & Atieh, 1987).

Additionally, the answers given by respondents about
coping behaviors may reflect how respondents "think" they cope with stress rather than how they actually do cope. As with all survey research, the respondents' answers are merely stand-ins for real situations and actions; thus survey responses are never precisely indicative (Alreck & Settle, 1985). Furthermore, due to the correlational nature of this study, cause and effect conclusions are not possible.

Review of Related Literature

This study is concerned with the relationships between occupational stress and selected variables that may influence the outcome of exposure to occupational stress in hospital nurses. Therefore literature on (a) stress, (b) burnout, (c) burnout and nursing, and (d) selected variables that may intervene in the stress-strain sequence are reviewed.

Stress, Stressors and Strain

Stress has been called the most grandly imprecise term in the dictionary of science (Newton, 1989). In fact stress, including job or occupational stress, is a term so loosely defined that Beehr and Franz (1987) recommended the term be banned completely. The confusion over the exact meaning of stress probably arises from stress researchers' attempts to take a word already widely used both colloquially and scientifically and make it their own and from disagreement among stress researchers with respect to
the meaning of the word.

In physics and engineering, the term stress describes the external force applied to an object and the term strain describes the effects. In stress literature, the term stress may mean (a) an environmental stimulus often described as a force applied to the individual, or (b) an individual's psychological or physical response to such an environmental force, or (c) the interaction of these two events (Matteson & Ivancevich, 1982; Lazarus & Folkman, 1984; Mason, 1975; Selye, 1976). Kahn (1986) suggested that because of the ambiguity of the term stress, the disagreement among stress researchers may be more "terminological than profound" (p. 43).

Another point of confusion regarding stress is the inference that stress is not unequivocally bad. Selye (1976), the father of stress research, regarded stress as positive when it energized people and brought them to heightened awareness and performance capabilities. Selye considered positive stress, termed eustress, a necessary part of human lives that could bring about planned change, increased productivity, and personal growth. According to Selye, when a person's capacity to use stress positively is overwhelmed, negative stress, called distress, occurs. Selye viewed distress as negative because it depleted the energy reserves and taxed the bodily systems in terms of maintenance and defense. Therefore, distress may be harmful
to both physical and psychological health. Despite Selye’s use of the terms eustress and distress to differentiate between positive and negative stress, the stress literature seems to rely on context rather than terminology to figure out whether stress is positive or negative.

Early theories of stress were concerned primarily with physiological responses. Selye (1976) viewed stress in physiological terms as the nonspecific response of the body to any demands made upon it and proposed the term stressor to refer to any external stimulus that evoked the stress response. Though Selye’s term stressor remains in current stress literature, his original view of stress has been expanded. Selye’s view of stress is inadequate because it provides no explanation of differing reactions to the same stressor both between different persons and within the same person. Additionally, Selye’s view of stress implies people are mere victims of external events.

Lazarus (Lazarus & Folkman, 1984) formulated a theory of psychological stress that recognized the interaction of physical, sociocultural, and psychological factors. Lazarus defined stress as a transactional process between the situation and the person that arises from how the person perceives the event (primary appraisal) and how the person perceives the ability to deal with the event (secondary appraisal). According to Lazarus, stress exists when the demands of the environment, in the person’s eyes, clearly
exceed the person's resources for handling them.

While there may be disagreement among stress researchers regarding the term stress, there is agreement among researchers concerning the term stressor and the consequences of exposure to stressors. The term stressor refers to environmental stimuli or demands that tax or exceed the resources of the system (Antonovsky, 1979; Beehr, 1984; Beehr & Bhagat, 1985; Fried, Rowland, & Ferris, 1984; McLean, 1979; Selye, 1975; Sharit & Salvendy, 1982). Stressors elicit a response in individuals often called strain (Beehr, 1984; Caplan, Cobb, & French, 1975; Kahn & Quinn, 1970). While strains can be categorized as physical, psychological, or behavioral, they are all, by definition, considered indicators of an individual's range of well-being.

Seen in this light, a job stressor is an environmental condition or event in the workplace that causes strain (Beehr & Franz, 1987). Motowildo, Manning and Packard (1986) provided a model of occupational stress that presumes occupational stress is subjective and is provoked by specific work events or conditions to which the person attaches meaning.

Ten components of the work environment thought to have the potential to be job stressors are: involvement, peer cohesion, staff support, autonomy, task orientation, work pressure, clarity, control, innovation, and physical
surroundings (Moos, Insel & Humphrey, 1974). Whether any of these elements of the work environment is perceived as a stressor, a producer of strain, or as a support, a resistance against strain is based on individual perceptions.

Perceptions of satisfaction or dissatisfaction with the work environment can be seen as reflections of the interaction of three factors: importance, uncertainty, and duration (Beehr & Bhagat, 1985). Importance refers to how significant or relevant the occurrence is to the person; uncertainty refers to lack of clarity about what will happen; and duration refers to the length of exposure to the element with longer exposure resulting in more strain.

The literature notes two important factors that may affect the stressor-strain sequence: predisposition variables and coping (Dohrenwend, 1986; Dohrenwend & Martin, 1979; Janis, 1986; Kobasa, 1979; Lazarus, 1966; Lazarus & Folkman, 1984; Rabkin & Streuning, 1976). Response to a potential stressor may be influenced by innate characteristics of an individual labeled a predisposition. Personality attributes related to emotional responsiveness, beliefs and other cognitive structures pertaining to the nature of environmental dangers, and self-concepts related to anticipated success or failure in carrying out protective actions are examples of predisposition variables (Janis, 1986). Vulnerability is another predisposition classified
by Dohrenwend (1986) as a negative force in the stressor-strain chain while personality hardiness is a predisposition considered by Kobasa (1979) to exert a positive effect on the stressor-strain relationship.

Coping, another intervening variable between stressors and strain (Dohrenwend & Martin, 1979; Lazarus, 1966; Lazarus & Folkman, 1984; Rabkin & Streuning, 1976), refers to the efforts made to master the condition perceived as taxing or exceeding individual resources. Coping may be thought of as either adaptive or maladaptive. The classification of coping as either adaptive or maladaptive is based on whether or not it results in a positive outcome. Both coping and personality predispositions are addressed in detail under separate sections of the literature review.

**Burnout**

The term burnout was introduced into the professional literature almost twenty years ago when Freudenberger (1974), a psychoanalyst, used the word in an article on staff behavior in alternative, help-giving facilities. Interest in burnout has been high since Freudenberger initially introduced the term. In fact, Corcoran (1987) noted that "few topics in the social sciences have received enthusiasm parallel to burnout" (p.57). Despite all the interest and subsequent research, burnout, like stress, is a difficult term to define precisely and succinctly. Part of the difficulty may result from the term burnout being used
colloquially to describe everything from a reaction to a bad day at work to serious physical and psychological dysfunction resulting from prolonged exposure to occupational stress.

A similar uncertainty about the meaning of burnout is also apparent in the professional literature as evidenced by the variety of definitions, proposed causes, and assumed effects associated with burnout (Cherniss, 1980; Edelwich & Brodsky, 1980; Freudenberger & Richelson, 1980; Golembiewski & Munzenrider, 1988; Maslach & Jackson, 1981; Matteson & Ivancevich, 1987; Pines & Aronson, 1988; Pines, et al., 1981). Descriptions of burnout in the professional literature vary from an emotional response to occupational stress (Edelwich & Brodsky, 1980; Freudenberger & Richelson, 1980; Golembiewski & Munzenrider, 1988) to a coping mechanism in which individuals distance themselves from clients to continue to work without being overly affected by the personal interaction the job entails (Cherniss, 1980; Maslach, 1976, 1982; Maslach & Jackson, 1982; Muldray, 1983; Pines & Maslach, 1978; Pines et al., 1981). Nonetheless, a basic part of all definitions of burnout is its relationship to a stressful work situation.

The presumed causes of burnout are not nearly as diverse as the definitions. A review of the literature surfaces three categories under which the causes of burnout can be placed: (a) work conditions themselves, such as role
ambiguity, lack of control, hierarchical work structure, and physical danger (Edelwich & Brodsky, 1980; Golembiewski & Munzenrider, 1988; Jackson, Schwab, & Schuler, 1986); (b) characteristics of the individual or personality, such as methods of handling problems, expression or control of emotions, use of stress management techniques, and self-concept (Maslach, 1976, 1982; Maslach & Jackson, 1982; Pines & Maslach, 1978); or (c) a combination of the two previously listed (Cherniss, 1980; Pines et al., 1981).

Two of the more prominent and prolific researchers in the field of burnout, Cherniss (1980) and Maslach (1982), share similar views of burnout and its causes. Cherniss referred to burnout as a process in which professionals' attitudes and behavior change in negative ways in response to job strain. Based on an intensive, longitudinal study of 28 new public professionals, Cherniss conceptualized burnout as a three stage "process in which a previously committed professional disengages from his/her work in response to stress and strain experienced on the job" (p. 16).

According to Cherniss (1980), burnout is a coping mechanism run amuck. The detached concern necessary to provide sound, objective professional judgement gradually becomes replaced with a detachment used to conserve energy needed for coping with psychologically demanding work situations. Eventually the person completely withdraws from involvement in work. Viewed from this perspective, burnout is a transactional
process of job stress, worker strain, and psychological accommodation. The changes in attitude and behavior associated with burnout provide a psychological escape for the person and ensure that further stress will not be added to the strain already being experienced.

The irony of burnout as a coping mechanism stems from the fact that the very mechanism used for defense usually leads to a greater sense of failure and frustration with the helping role (Cherniss, 1980). Thus, burnout becomes a self-perpetuating cycle.

Another irony about burnout first noted by Freudenberger (1977) is that people who suffer from burnout do not see "themselves as angry, rigid, cynical and depressed human beings others have difficulty working with. Instead they find fault with everything and everyone around them, complaining about the organization and reacting cynically to whatever is suggested or attempted by others." (p, 26).

Maslach (1982) also characterized burnout as a transactional process. Maslach and Jackson (1981) defined burnout as "a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do 'people work' of some kind" (p. 99). Maslach contended burnout is a combination of three separate dimensions called Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Furthermore, Maslach (1982) theorized that differences in
individual personality had special significance for burnout. With this thinking, Maslach set the stage for the idea that certain types of people are more susceptible, or in Maslach's terms more vulnerable, to experiencing burnout.

**Stages of Burnout**

Most researchers in the field agree that burnout is not an on/off experience. It is highly unlikely that a person can be burned out today and well tomorrow. Furthermore, researchers concur that burnout is not the result of a single event but a cumulative phenomenon beginning with barely noticeable changes and proceeding through increasingly intense reactions until it becomes a crisis that, if left unresolved, may cause chronic depression, substance abuse, or suicide. However, these same researchers differ in their conceptualization of the stages that characterize the degree or extent of burnout experienced. Edelwich and Brodsky (1980) described four stages of disillusionment: (a) enthusiasm, over identification with clients and excessive, inefficient expenditure of personal energy; (b) stagnation where the person merely conducts the work; (c) frustration with the work stemming from questions about the effectiveness and value of the job itself; and (d) intervention of some sort to break the cycle. However, Maslach (1982) delineated three levels of fatigue: (a) physical fatigue and feeling drained; (b) psychological fatigue with alienation from clients and work; and (c)
spiritual fatigue which involves self-doubt.

Cherniss (1980) also conceptualized burnout as having three stages. Stage one individuals experience feelings of stress resulting from an imbalance between demands and resources. In stage two the stress progresses into strain that Cherniss considered an immediate short term emotional response to anxiety, tension and fatigue. In the third and final stage, individuals attempt to cope defensively by altering attitudes and behaviors, such as treating clients mechanically.

Another perspective on the progression of burnout is found in Tanner's (1983) five stages: (a) physical well-being with chronic, minor ailments; (b) irritability marked with sleeping, eating and drinking irregularities; (c) intellectual boredom and shortened attention span; (d) change in lifestyle or career; and (e) perceived loss of skills and strengths.

Golembiewski and Munzenrider (1988) conceived a phase model of burnout, based on Maslach's (1982) conceptualization of burnout, to reflect the progressive nature of burnout. According to Golembiewski and Munzenrider burnout progresses from depersonalization to diminished personal accomplishment to emotional exhaustion. Unlike the other conceptualizations on the development of burnout, this model assumes eight increasingly virulent phases of burnout with Phase I (low Emotional Exhaustion,
low Depersonalization, and high Personal Achievement) being the most innocuous and Phase VIII (high Emotional Exhaustion, high Depersonalization, and low Personal Achievement) being the most destructive. Research on the phase model presents evidence that burnout levels seem to be substantially stable over extended periods of time. Observations made up to a year showed a person's phase assignment tended to remain stable or to fluctuate within a narrow range of phases if movement did occur (Golembiewski & Boudreau, 1991). An explanation for these diverse descriptions of the development of burnout may be found in the difficulty inherent in categorizing and quantifying descriptions of human behavior.

**Construct Validity**

Despite the acknowledgment of burnout as an important occupational hazard among a variety of professional groups, several questions remain about the validity of the construct. Part of the definition of any concept is the act of distinguishing it from other related phenomena. The diversity of burnout definitions, causes, and symptoms has contributed to the confusion about the distinction of burnout from other related constructs. For example, burnout is often confounded with dissatisfaction, tedium, stress, morale, anxiety, tension, conflict, pressure, boredom, fatigue, strain, and depression (Herr & Cramer, 1992).

Meier (1984) attempted to clear the confusion by
examining the similarities and separateness among the constructs of burnout, depression and job satisfaction. Using Campbell and Fiske’s (1959) multitrait-multimethod approach, Meier found strong support for the convergent validity of burnout. Additionally, the burnout measures examined (Maslach Burnout Inventory and Meier Burnout Assessment) correlated highly and significantly with each other. However, the measures of burnout also correlated highly with depression. This weakens the support for burnout’s discriminant validity. Meier concluded that despite the ability of the burnout measures to largely meet Campbell and Fiske’s requirements for construct validity, considerable overlap exists between burnout and depression measures.

Although not universally accepted, Maslach’s (1982) definition of burnout as a syndrome of emotional exhaustion, depersonalization of others, and feelings of reduced personal accomplishment is the most widely cited (Lee & Ashforth, 1990). Consistent with this general acceptance, the most widely used measurement of burnout is the Maslach Burnout Inventory (hereafter referred to as the MBI) developed by Maslach and Jackson (1981). Following the lead of Meier (1984), Koeske and Koeske (1989) conducted a critical examination of the burnout construct using the MBI. Their findings support the construct validity of the MBI. While the research supported the tri-component
conceptualization of burnout, there was also strong evidence that emotional exhaustion is the central core of burnout. This is consistent with Golembiewski and Munzenrider's (1988) view of emotional exhaustion as the most virulent dimension of burnout.

Lee and Ashforth (1990) also investigated the three dimensions of the MBI through confirmatory factor analysis. Their results supported the three factor model of burnout with emotional exhaustion and depersonalization being highly correlated. Additionally emotional exhaustion and depersonalization were more strongly associated with psychological and physiological strain than was Personal Achievement.

**Incidence of Burnout**

The incidence rate of burnout does not appear to differ significantly between men and women, but the aspects of burnout experienced do differ. Women experience more emotional exhaustion and they tend to experience it more intensely than men. Men are less likely to experience depersonalization (Ivancevich, Matteson, Freedman, & Phillips, 1990). The incidence rate of burnout among Blacks is lower than that of Whites. Perhaps having experienced that the world won't change over night, makes Blacks more realistic and less disillusioned and thus better prepared to deal with long standing problems (Ivancevich et al., 1990). Correspondingly, married people also experience burnout less
frequently and less intensely than do single people. Divorced persons fall between the married and single persons in their incidence of burnout (Ivancevich et al., 1990).

Burnout is significantly greater among younger workers (Ivancevich et al., 1990). Perhaps it is the idealism of young professionals that makes them susceptible to burnout early in their careers and subsequently more likely to leave their profession.

Although there are connections noted between burnout and turnover (Cherniss, 1980; Ivancevich et al., 1990; Maslach, 1982; Maslach & Jackson, 1982; Matteson & Ivancevich, 1987; Pines & Aronson, 1988; Pines et al., 1981) a recent in-depth exploratory study conducted on the long term consequences of burnout found that people who experienced burnout early in their careers were less likely to change careers (Cherniss, 1992). This finding seems to dispel the popular belief that burned-out workers leave their profession. Interestingly, the study found no significant relationship between early career burnout and job dissatisfaction. Persons who were more burned out at the end of the first year of their career were no more or less satisfied with their work 10 years later than those who were less burned-out at the end of their first year. While it is tempting to assume a causal relationship between early career burnout and later career stability based on the findings of Cherniss (1992), it must be noted that the
sample was small (N = 25) thus limiting the analysis to simple correlations and t-tests. As Cherniss noted, many factors could explain the counterintuitive results of the study.

One factor, mentioned by Cherniss (1992) in explanation of the unexpected findings, relevant to this study is the idea that individuals who experienced less burnout initially were psychologically hardier (Kobasa, 1979) and subsequently more resistant to burnout and also more willing to take risks later in their careers. The concept of psychological hardiness is described at length in a following section of the literature review.

The psychological symptoms of burnout, apathy, withdrawal from work, resentment, sense of failure or the physical manifestations of burnout such as headaches, backaches, frequent colds, sleep disturbances and muscle tension, have been found in a variety of occupations (Beemsterboer & Baum, 1984; Mathews, 1990); however, burnout is most prevalent in occupations that require high commitment and sustained interpersonal involvement with people (Cherniss, 1980; Keane et al., 1985; Mathews, 1990; Maslach, 1976; Pines & Aronson, 1988). Hospital nursing is an occupation that definitely meets that description.

**Stress, Burnout, and Nursing**

The concept of stress has been a concern to nurses since 1859 (Nightingale, 1949) and has been described in
nursing literature since the 1950s (Stehle, 1981). Nursing is unique in that it involves the use of the self in direct, face-to-face relations with individuals and communities concerning their health. As such, nurses are witnesses to all major health-related life events and processes, including birth, death, injury, illness, suffering, surgery, grief, psychosis, addiction, and disabilities. In addition, nurses are witnesses to the successes and failures of nearly all health care interventions, including their own (Hall & Stevens, 1991).

As previously mentioned, burnout can be measured in terms of progressively virulent phases with Phase I being the least virulent (Golembiewski & Munzenrider, 1988). A convenience sample of over eighty-five hundred persons in various healthcare settings surveyed by Golembiewski and Boudreau (1991), showed nearly one in every three nurses qualified for Phase VI-VIII burnout (high emotional exhaustion, high depersonalization, and low personal accomplishment). While these are striking findings, the sample did not include large, metropolitan hospitals. If large metropolitan hospitals were included the percentage of healthcare employees falling into the advanced phases of burnout would be even larger. In truth, burnout may be an even more significant problem in healthcare settings than the literature reports.

Researchers identified the six following categories of
common nursing stressors: (a) excessive workload; (b) emotional issues of both self and others related to dealing with death and severe illness; (c) interpersonal relationships with physicians, administration, and other nurses; (d) responsibility for life and death decisions; (e) stress in nurse-patient relationships; and, (f) personal life stressors (Bailey, 1980; Caldwell & Weiner, 1981; Dear, et al., 1982; Foxall, et al., 1990; Numerof & Abrams, 1984). Besides these common stressors, the physical nature of hospital nursing may be stress producing because nursing units tend to be isolated, small, noisy, visually overwhelming, smelly, and filled with radiological hazards and biological hazards such as bacteria and viruses (Baj, 1980; Jacobson, 1983; Topf, 1989). With the arrival of diseases such as AIDS (Acquired Immune Deficiency Syndrome) and drug-resistant Tuberculosis, some nurses now view their occupation as life threatening (Foxall et al., 1990; Swirsky, 1992). Furthermore, in most hospital settings, nursing care must be delivered around the clock necessitating nurses doing shift work. Shift work has been shown to impose excessive physical and psychological costs on workers ranging from physical complaints to marital discord (Jacobson, 1983).

Inadequate staffing can also play a role in producing stress in nurses. Research shows that nurses are less sensitive to other stressors and cope better when staffing
levels are adequate (Caldwell & Weiner, 1981; Gentry & Parkes, 1982).

Turnover of nurses is one of the more costly and crucial issues facing the nursing profession. Turnover may play a role in producing burnout because turnover increases the number of inexperienced nurses in the staff pool, which then becomes a stressor to other more experienced nurses who must not only train new nurses but also carry a heavier load to compensate for the inexperience of their new co-workers (Dear, et al., 1982).

Another potentially stressful dilemma for nurses is that some environments stereotype one sign of a highly competent nurse as the amount of time spent with patients. In reality the more competent a nurse is, the less actual time is spent with patients because of additional duties (Holt, 1983). Traditionally, the best bedside nurses are promoted into managers who are often expected to "take charge" of the unit instead of delivering patient care.

The potential stressors discussed previously seem to be indigenous to the practice of hospital nursing. Many of these external pressures and conditions can never be totally removed, only minimized (Steffon, 1980).

As noted in other job related stress research, an important variable in nursing burnout could be individual perceptions and motivations. Many nurses have what is called the helping profession syndrome, which occurs when
individuals devote time giving to others the care they would like to have for themselves (Hodgkinson, 1984; Malan, 1979; Misiaszek, 1993; Summers, 1992). Malan describes this syndrome as a conflict between unsatisfied self needs and the demands of others that results in a typical depressive defense of overcompensation. The genuine wish to give is over-emphasized to keep at bay resentment about having to give without receiving enough. The more one gives without getting one’s own needs met, the more other people’s needs begin to feel like demands. This defense tends to break down suddenly when the individual’s emotional balance of payments gets into a severe deficit (Malan, 1979). When two such people come together the consequences may be a perpetual struggle about whose needs are going to be met by the other. Perhaps some of the interpersonal difficulties that arise between nurses are the byproducts of the helping profession syndrome.

Though it is generally accepted that nursing is a very stressful occupation, when one gets to know nurses, one finds that some nurses seem highly stressed or burned-out by their environment, while others seem to thrive in the same atmosphere. This observation inspired investigation into variables that may promote stress resistance among hospital nurses. One stress resistance resource that has received considerable attention in the nursing literature is psychological hardiness (Boyle, et al., 1991; Keane, et al.,
In a comparison study of burnout in ICU and non-ICU nurses (N = 96), Keane et al. (1985) investigated the relationship between personality hardiness and burnout as measured by the Staff Burnout Scales for Health Professionals (SBS-HP) developed by Jones (1980). The pattern of correlations between the composite hardiness scores and burnout scores tended to support the idea that personality hardiness is inversely related to burnout. Further analysis of the relationship between the components of hardiness suggested that control and, to a lesser extent, commitment were predictive of burnout. Thus nurses who have an internal locus of control and who have higher levels of commitment are less likely to experience burnout. Furthermore, the study showed two biographical variables correlated with burnout. Older nurses had slightly lower burnout scores and nurses with baccalaureate degrees had somewhat higher levels of burnout. However, these correlations were only marginally significant.

Another finding of particular interest uncovered by Keane et al., (1985) is that ICU nurses do not experience more burnout than non-ICU nurses. Intensive care nursing is generally thought to be very stressful and therefore it is assumed that ICU nurses would be more prone to burnout. Despite problems of external validity and expost facto
design, this study lends support to the consideration that an understanding of a personality disposition, in this case hardiness, can lead to an increased understanding of burnout within the nursing profession.

In an attempt to replicate the findings of Keane et al. (1985), McCranie et al. (1987) investigated the relationship between hardiness and burnout in 107 registered nurses working in a variety of nursing units in a large community hospital. To directly examine the potential buffering effect of hardiness on burnout, a measure of job stress was included in the study. Multiple regression analyses suggested that hardiness had beneficial main effects in reducing burnout in hospital nurses, but the data did not seem to support the buffering effect of hardiness on burnout since high levels of burnout were associated with high levels of job stress. Contrary to other research, McCranie et al. found no significant association between burnout scores and age, years of nursing experience, marital status or type of nursing education. The finding of no relationship between clinical work setting (ICU versus non-ICU) and burnout was supported.

In a similar manner, Rich and Rich (1987) surveyed 100 female staff nurses to explore the relationship between hardiness and burnout. This study was expanded to include part-time as well as full-time nurses working in a variety of nursing units. Consistent with the findings of the
previously mentioned research, Rich and Rich found an inverse relationship between hardiness and burnout. The inverse relationship between age and burnout was also supported; however, age and hardiness were only weakly correlated. Factor analysis of the hardiness measures showed hardiness, for that sample, to be composed of two independent factors: commitment/control and need for security. These findings are similar to those of Keane et al. (1985).

Boyle et al. (1991) conducted a survey study of 102 registered nurses employed full-time and part-time as staff or charge nurses in six intensive care units to study the relationship among social support, hardiness, ways of coping, and burnout. Results showed social support, both work-related and nonwork-related, had a significant negative relationship with burnout. Consistent with previously cited studies, personality hardiness was negatively related to burnout. The Seeking Social Support Subscale of the Ways of Coping Checklist, a combination of problem-focused and emotion-focused items, was positively related to hardiness. Furthermore the use of emotion-focused coping was positively related to burnout. Whereas hardiness was a significant predictor of burnout, it was negatively correlated to emotion-focused coping and unrelated to problem-focused coping. Consequently Kobasa's (1982a) theory that hardiness might mitigate the harmful effects of stress by facilitating
more appropriate ways of coping was only partially supported by this study.

Boyle et al. (1991) postulated that the correlation between emotion-focused coping and burnout was a reflection of the emotional and mental exhaustion comprising the burnout syndrome. It is conceivable that feelings of hopelessness and helplessness usually associated with burnout may foster the use of emotion-focused rather than problem-focused coping because nurses who are burned-out may lack the energy to use the latter type of coping. Additionally, as Pines and Aronson (1988) noted, active problem-focused coping strategies are generally more effective in situations that can be changed. Many stressful situations experienced by nurses are not amenable to change, e.g., caring for ill people, dealing with death and dying.

The research examining the relationship between hardiness and burnout in nurses generally supports the idea hardy nurses are less prone to burnout. Nevertheless it must be noted that the research is scant and that the different measurements of hardiness and burnout used in the studies may make the consistency of conclusions open to criticism. Two of the studies discussed (Keane et al., 1985; Rich & Rich, 1987) used a five-scale measurement for hardiness (Kobasa, 1979), whereas McCranie et al. (1987) used a 36 item abridged version of the hardiness scales. Moreover, burnout was measured by two different instruments,
the SBS-HP (Keane et al., 1985; Rich & Rich, 1987) and the Tedium Scale (McCranie et al., 1987). None of the nursing studies cited used the Maslach Burnout Inventory, considered the most appropriate measurement of burnout (Koeske & Koeske, 1989). Although the methodological differences among the studies may make them suspect, the consistency of overall findings despite the variation in measurement tools may be a testimony to the strength of the relationship between hardiness and burnout.

Coping with Stressors

In recent years, interest has shifted from investigating the impact of stressors on individual stress responses to investigating factors that intervene in the stress-strain sequence (Houtman, 1990). One intervening factor that has begun to play an increasingly important role in attempts to understand the stress-strain sequence is the concept of coping (Dewe & Guest, 1990). Despite the recent emphasis on the role of coping in stressful situations, it can be argued that we know little about specific coping strategies people use (Moos & Billing, 1982), and that there is far too little empirical evidence about the effects of coping in general and in work settings in particular (Dewe, 1989; Parasuraman & Cleek, 1984; Shinn, Rosario, Morch, & Chestnut, 1984).

According to Lazarus and Folkman (1984), coping is "cognitive and behavioral efforts to master, reduce, or
tolerate the internal and/or external demands that are created by the stressful transaction" (p.843).
Thus coping is a process that begins with a cognitive appraisal that categorizes a particular transaction between the person and the environment as either irrelevant, benign, or stressful depending upon the significance of the transaction to the person's sense of well-being. Benign or irrelevant appraisals require no further evaluative process; however, when a transaction is appraised as stressful, the secondary appraisal process of deciding what, if anything, can be done comes into play. Stressful, according to Lazarus and Folkman, can mean a threat or actual harm to well-being or a challenge. The difference between threat and challenge is one of emotionality. Negative emotions such as fear, anxiety, anger are characteristic of threat; excitement, eagerness, and exhilaration are positive emotions associated with challenge.

Secondary appraisal is an evaluative process that takes into consideration (a) what coping behaviors are available, (b) the likelihood that a given coping behavior will accomplish what it is supposed to, and (c) the likelihood that the person can apply a particular coping behavior or set of behaviors effectively (Lazarus & Folkman, 1984). These two appraisals, which often occur outside a person's level of awareness, greatly affect the actions taken to deal with the stressor. The actions taken by an individual to
deal with a stressor can be referred to as coping behaviors. Though there are many different types of coping behaviors, most coping behaviors fall into two broad categories, instrumental or palliative (Dewe, 1989). Instrumental coping behaviors attempt to solve the problem while palliative coping behaviors try to minimize the effects of the problem without actually solving the problem. Lazarus and Folkman (1984) prefer the terms problem-focused coping and emotion-focused coping. Problem-focused coping describes coping behaviors aimed at tackling the source of the stress; emotion-focused coping describes behaviors aimed at reducing or eliminating the emotional discomfort associated with, or cued by, the stressor. Though most stressors elicit both problem-focused and emotion-focused coping, problem-focused coping tends to predominate when people believe something constructive can be done about the situation. Conversely emotion-focused coping is more likely when people believe the situation is one that must be endured (Lazarus & Folkman, 1980; McCrae, 1984).

Though the distinction between problem-focused and emotion-focused coping is an important one, the dichotomy is too simplistic because research typically finds responses to stressors to form several factors rather than just two (Carver, et al., 1989). Furthermore, there may be specific coping behaviors within the large category that are not related. For example, some emotion-focused coping involves
denial, others involve positive reinterpretation of the event, and still others involve seeking social support. This same comment applies to problem-focused coping. Though problem-focused coping appears to be a single process, it can take the shape of many different activities such as planning, screening out other activities, or even forcing oneself to wait before acting (Carver et al., 1989).

Lazarus and Folkman (1984) suggest that appraisal and subsequent coping behaviors are influenced by individual differences in coping resources. Coping resources are defined as "relatively stable characteristics of a person's disposition and social environment" (Terry, 1991, p. 1031). Coping resources are very similar to what Antonovsky (1979) termed resistance resources. Resistance resources include any characteristic of a person, group, or environment that facilitates effective tension management. According to Antonovsky major resistance resources consist of the following five categories: (a) artifactual-material; having adequate money, food, shelter, clothing, and physical strength; (b) cognitive-emotional; exhibiting a sense of coherence, good ego identity, knowledge, and intelligence; (c) interpersonal-relational; possessing adequate power, status, and social supports; (d) valuative-attitudinlal; manifesting coping strategies of rationality, flexibility, and far-sightedness; and (e) macrosociocultural; possessing a language, a role set and set of norms that provide a wide
range of answers, explanations, and ways of being in a larger world. Although resistance resources and coping resources seem similar, the role they play in the management of stress is much different.

Resistance resources are considered factors that help facilitate the management of stress (Antonovsky, 1979; 1987) while coping resources are seen as factors that affect the appraisal and subsequent selection of coping behaviors (Lazarus & Folkman, 1984). Therefore coping resources may influence the stress-strain sequence by modifying individual perceptions to keep the experience of stress within manageable bounds (Andrews, Tennant, Hewson, & Vaillant, 1978; Lazarus, 1966; Monat, Averill & Lazarus, 1972; Pearlin & Schooler, 1978).

Several researchers have identified personality dimensions that appear to influence the stress-strain sequence (Chann, 1977; Kobasa, 1979; Parkes, 1990; Pearlin & Schooler, 1978; McCrae & Costa, 1986; Scheier, Weintraub, & Carver, 1986). Self-esteem, helplessness, chronic anxiety, Type A personality, personality hardiness, neuroticism, extroversion, flexibility, and optimism have been found to act as moderators of the stress-strain sequence (Chann, 1977; Kobasa, 1979; Parkes, 1990; Pearlin & Schooler, 1978; Scheier, et al., 1986). How these personality dimensions influence the stress-strain sequence through coping is not exactly clear. It may be that these personality dimensions
result in a particular coping style or disposition that people bring with them to the stressful situations they encounter. Seen in this light, people do not approach each stressful situation anew, but bring to bear a preferred set of coping behaviors that remain relatively fixed across time and circumstances. This view is controversial because it has been repeatedly emphasized that coping is a dynamic process that shifts in nature from stage to stage of a stressful transaction (Folkman & Lazarus, 1980; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986).

Research about the dispositional nature of coping could be helpful in finding out just how personality dimensions affect the stress-strain relationship.

The existing literature presents a confusing picture of the role of coping in work settings. Some results suggest that coping strategies that are effective in domestic settings may fail to alleviate stress in occupational settings or may alleviate stress only to a limited degree (Pearlin & Schooler, 1978; Shinn, et al., 1984). Other studies do not hold that individual coping attempts are ineffective in the work setting (Latack, 1986; Osipow & Davis, 1988; Parasuraman & Cleek, 1984).

Parasuraman and Cleek (1984) examined the role of coping as a moderator variable. They found that the relation between work overload and affective distress was accentuated by the use of maladaptive coping strategies.
Similarly, Osipow and Davis (1988) showed the moderating relations of four types of coping resources: recreation, self-care, social support, and rational/cognitive coping. Though all these coping resources were successful in reducing strain associated with occupational stress, rational/cognitive coping was the least effective. In fact low scorers on rational/cognitive coping reported less strain. This counterintuitive finding regarding the effect of rational/cognitive coping on the stress-strain relationship warrants further investigation.

**Personality Hardiness**

Psychological resources are personality characteristics that people draw upon to help them withstand threats posed by events and objects in their environment. These resources reside within the self and can provide formidable barriers to the consequences of stressful events. Personality Hardiness (hereafter called hardiness) is one psychological resource that appears to be effective in buffering occupational stress outcomes in hospital nurses.

The idea of hardiness as a source of resistance to the negative effects of stressful life events derives from existential personality theory (Kobasa & Maddi, 1983) and is supported by results from varied personality (Lefcourt, 1973), social psychological (Rodin & Langer, 1977), and developmental studies (Neugarten, 1974). These studies imply that the determination of an event or situation as
stressful is the result of an interaction between the stressor and a person's appraisal of the stressor. Somehow, hardy persons seem to view stressors as positive and as opportunities for growth and development (Kobasa & Pucetti, 1983). The theory of a hardy personality is grounded in research showing persons who experience high degrees of stressors without becoming ill exhibit different personality characteristics than persons who become ill under similar conditions (Kobasa, 1979).

Hardiness is hypothesized to consist of three crucial personality dispositions, commitment, control, and challenge, that influence cognitive appraisal and behavior in response to stressful events. Cognitively, these three personality dispositions are thought to influence the perception of an event and the meaning attached to it; behaviorally, commitment, control, and challenge appear to influence the type of activities chosen to deal with a particular event (Gentry & Kobasa, 1984; Holt, et al., 1987; Kobasa, 1979; Kobasa, 1982a).

**Commitment.** Hardy individuals are conceptualized as having a high level of commitment or a "... tendency to involve oneself in (rather than experience alienation from) whatever one is doing or encounters" (Kobasa, et al., 1982, p. 169). According to hardiness theory, this tendency toward involvement in ongoing life events reflects a generalized sense of purpose, meaningfulness, and self-
understanding. Persons with a sense of commitment are thought to be capable of finding meaning and value in whom they are and in what they are doing. Being able to ascribe meaning to various life events, is thought to make people high in commitment more likely to cope in a manner characterized by activeness and approach, as opposed to passivity and avoidance (Holt et al., 1987).

Measurement of commitment in hardiness research has been based on positive indicators such as role consistency and active involvement to maintain health as well as on negative indicators of alienation from self, work, interpersonal relationships, family and social institutions (Lambert & Lambert, 1987; Maddi, Hoover, & Kobasa, 1982; Maddi, Kobasa, & Hoover, 1979; Pollock & Duffy, 1989).

Control. Hardy individuals are presumed to have a high sense of perceived control. Control is defined as a "... tendency to feel and act as if one is influential (rather than helpless) in the face of varied contingencies of life" (Kobasa et al., 1982, p. 169). According to hardiness theory, control allows people to perceive themselves as influential in the ongoing course of life events. In addition, a sense of control is thought to enable hardy people to transform single events into a continuing life plan rather than view events as isolated, meaningless incidents (Holt et al., 1987). Under stress, persons who possess a sense of control appraise the
situation by breaking it into component parts and deciding where their actions are most likely to have an effect. Thus, hardy persons are believed to deal with stressful situations using a broad array of coping skills.

The control dimension of hardiness has been measured both positively and negatively. Negative indices include measurements of nihilism, external locus of control, and powerlessness (Kobasa, 1979; Maddi, et al., 1979; Rotter, Seeman, & Liverant, 1962). Positive measures of control include measures of achievement, dominance and leadership (Lambert & Lambert, 1987) as well as actions geared toward promoting health (Pollock & Duffy, 1989).

Challenge. Challenge, defined as a "... belief that change rather than stability is normal in life and the anticipation of changes are [sic] interesting incentives to growth rather than threats to security" (Kobasa et al., 1982, p. 169), is the third component of hardiness. Individuals with this characteristic are said to emphasize growing and changing, rather than conserving and protecting the status quo. Hardy persons are believed to view change, not stability, as the acceptable norm (Holt et al., 1987; Kobasa et al., 1982). Seen in this light, a sense of challenge fosters openness and flexibility that permit integration and effective appraisal of even exceedingly incongruous events. Hardy people tend to be more flexible, facilitating, problem-solving, and at times, actively pursue
challenging situations. Having a sense of challenge requires contact with one's environment, active involvement with others, and learning form the changes experienced in life.

Without involvement with others, individuals may come to believe that life changes rarely occur; they may consider it best when their environment is stable and come to view life events as a threat. Consistent with these beliefs, measurements of vegetativeness, security, and adventurousness have been used as negative measures of challenge (Hahn, 1966; Kobasa, 1979; Maddi et al., 1979). Interesting experiences, endurance, and persistence have been used as positive measures of challenge (Lambert & Lambert, 1987; Pollock & Duffy, 1989).

Hardiness was originally considered a means of moderating the stress-physical health relationship; however, the concept was expanded to denote psychological health. Several studies investigated the relationship between hardiness and psychological health. Psychological health was significantly predicted by the main effects of hardiness in studies using concurrent (Holt, et al., 1987; Kobasa, 1982; Nowack & Hanson, 1983; Wendt, 1982) and prospective designs (Nowack, 1986, 1989). Moderating effects of hardiness were found by examining significant stress by hardiness interactions in a variety of populations (Funk & Houston, 1987; Ganelen & Blaney, 1984; Kahn, 1987; Lang &
Markowitz, 1986; Rhodewalt & Agustsdottir, 1986; Rhodewalt & Zone, 1989; Topf, 1989). Hardiness was also found to be related to: (a) fathers' martial adjustment in a group of married couples (Barling, 1986), (b) objectively assessed performance of police academy cadets (Herlich, 1985), and (c) higher levels of general activity in a group of senior citizens (Magnani, 1986). Although these studies used a variety of instruments to measure stress and hardiness, the results unequivocally supported a direct relationship between hardiness and psychological health.

Findings of the numerous studies cited seem to suggest that hardiness is related to a wide range of psychological outcomes. Of particular interest for this studies are findings related to burnout. Several significant studies (Holt et al., 1987; Keane et al., 1985; McCranie et al., 1987; Nowack, 1986; Nowack & Hanson, 1983; Rich & Rich, 1987) tested the effect of hardiness on the stress-burnout relationship. These studies used the hypothesis that individual differences, in addition to situational work stress, account for the phenomenon of burnout. Though these studies defined burnout similar to Maslach and Jackson's (1981) conceptualization of burnout as a syndrome consisting of emotional exhaustion, lack of personal accomplishment, and apathy toward others in the work area, the studies used different measurements of burnout and different measurements of hardiness. Despite the differences in instrumentation,
the results of all the studies fully confirm the stated hypothesis that hardiness acts as a resistance resource for burnout. Hardiness had significant negative, main, and interaction effects on burnout in a sample of elementary school teachers (Holt et al., 1987) and in a sample of employees in the human services (Nowack, 1986). Furthermore, Nowack and Hanson (1983) found hardiness to be significantly related to the severity of emotional exhaustion and the frequency and severity of depersonalization and personal accomplishment in college residence assistants.

Studies which examined the relationship between hardiness and burnout in nurses (Boyle et al., 1991; Keane et al., 1985; McCranie et al., 1987; Rich & Rich, 1987) reached similar conclusions that hardiness serves as a buffer for burnout. "The variety of measures, the substantial number of prospective designs, the findings of significant interactions of stress by hardiness, together with the diverse and large populations tested, underscore the generality of the hypothesis that hardiness moderates stress as applied to psychological well-being" (Orr & Westman, 1990, p. 75).

**Hardiness and Coping**

Kobasa (1979) suggested that hardiness in individuals was related to coping styles. Kobasa noted that hardy persons use transformational coping while persons with few
hardy characteristics tend to use regressive coping, e.g., denial or avoidance.

Transformational coping is defined in the literature as "optimistic appraisals, by which the stressful events tend to be perceived as natural changes, meaningful and interesting, despite their stressfulness" (Kobasa et al., 1985, p. 525). The concept of transformational coping is rooted in the existential belief of meaningfulness. Through transformational coping stressors are transformed into meaningful opportunities for personal growth and societal benefit (S. Dane, personal communication, March 13, 1992). To cope transformationally, an individual must (a) cognitively appraise the stressful event in meaningful, but realistic, terms; (b) set the event in perspective with other life events, and (c) act decisively to alter or terminate the situation. Therefore transformational coping involves "an amalgam of cognition, emotion, and action aimed at not only survival but also the enrichment of life through development" (Kobasa, et al., 1982, p. 368).

It has been suggested that hardiness moderates the stress-strain relationship because hardy persons experience fewer stressful events (Hull et al., 1987). Recurrent findings show, that when tested by reported, recent life events, hardiness is not related to the number or type of events (Kobasa et al., 1982; Rhodewalt & Agustsdottir, 1986; Rhodewalt & Zone, 1989; Weibe & McCallum, 1986). These
findings seem to suggest that hardy individuals experience events in a way similar to nonhardy individuals, but that hardy individuals appraise their life as less stressful.

A recent investigation of the proposed mechanisms of hardiness (Weibe, 1991) provides additional evidence that hardiness moderates stress through an adaptive stress appraisal process. High and low hardy male and female undergraduates (N = 240) completed an evaluative threat task that was manipulated to influence appraisals of the task in a manner consistent with hardiness theory. Results show high hardy subjects displayed higher frustration tolerance, appraised the same objective stressor as less threatening, and responded to the stressor with more positive and less negative affect than did low hardy subjects. The convergence of the effects for measured hardiness and manipulated appraisals suggested that hardiness affects cognitive appraisal in such a way that stressfulness of the event is reduced and psychological arousal is altered (Weibe, 1991). These studies support Kobasa et al.'s (1985) premise that transformational coping involves optimistic appraisal of the stressful event. However, Hull et al. (1987) maintained that hardy individuals report better health, less depression, and less burnout, not because they are healthier, less depressed, and less exhausted by their work, but because reporting negative symptomatology is inconsistent with the hardy individual’s self-image as a
resilient person. Following this line of thinking, Hull and associates (1987) implied that hardiness affects outcomes not through an optimistic appraisal of the situation but through denial of the negative aspects of the event.

In addition to appraisal, the transformational coping model intimates some type of action aimed at removing or controlling the stressful event. The specific actions taken by an individual when dealing with a stressful event may be termed coping behaviors. The relationship between hardiness and coping behaviors was investigated in studies with both physical health and psychological health as dependent variables: exercise (Kobasa et al., 1985), health-promoting behavior (Wiebe & McCallum, 1986), and regressive coping style (Kobasa, 1982b). Consistent with the transformational coping model, these studies found emotion-focused coping was negatively correlated to hardiness or some component of hardiness. Similarly, research conducted on an all nurse sample (Boyle et al., 1991) found the use of emotion-focused coping was negatively related to hardiness and positively related to burnout.

The relationship between hardiness and problem-focused coping is unclear. A main effect of hardiness on active coping was found in a prospective study by Lang (1987). Lang found that in an intensive academic evening course, hardy students used a coping strategy of planned task management more frequently than did nonhardy students.
However, this study failed to test the moderating effect of coping on psychological or physical health.

Allred and Smith (1989), using an experimental design, found that high hardy male students involved in high stress conditions immersed themselves in positive thinking more frequently than did the low hardy students in similar conditions. In fact, as conditions became more stressful, the hardy students engaged in even more positive thinking while the opposite was true for the students rated low in hardiness. Allred and Smith also noted an interesting physiological difference between the high hardy and low hardy participants. Hardy participants had larger systolic blood pressure responses to the task than did nonhardy participants. The authors suggested the increased arousal may reflect potentially adaptive or problem-focused coping rather than distress. In an all nurse sample, hardiness was unrelated to problem-solving coping (Boyle et al., 1991).

The research on hardiness and coping shows a repeated negative relationship between hardiness and emotion-focused coping but fails to provide a clear picture of the relationship between hardiness and problem-focused coping. Moreover, the studies cited fail to show how hardiness and coping style are related to psychological health and strain during stressful work situations.

Measurement of Hardiness

Many criticisms of the hardiness concept are based on
methodological flaws of the measurement of hardiness (Carver, 1989; Funk & Houston, 1987; Hull et al., 1987). One major criticism is the use of negative indicators as measures of hardiness. The three subscales that comprise the original hardiness measurement are based on negative definitions, e.g., commitment is the absence of alienation, control is the absence of powerlessness, challenge is the lack of security (Kobasa, 1979). The use of negative indicators to measure a concept creates some conceptual and empirical problems. Indexing a high level of one characteristic (e.g., commitment) through low scores on another (e.g., alienation) implies that one is the opposite of the other. Obviously this may not be the case because many other concepts such as unity may be the opposite of commitment. Additionally, a low score on a scale of alienation may represent neutral feelings rather than the presence of feelings opposite to alienation (Funk & Houston, 1987).

Another criticism centers on the variety of hardiness instruments used in research. As several writers note, the summaries and generalizations across the hardiness literature are complicated by the use of different versions of the hardiness instrument (Funk & Houston, 1987; Hull, et al., 1987; Orr & Westman, 1990). Kobasa (1979) originally assessed hardiness by a questionnaire made up of several standardized instruments selected to tap the hardiness components of commitment, control, and challenge.
Commitment was measured by the Alienation from Self and Alienation from Work scales of the Alienation Test (Maddi, Kobasa, & Hoover, 1979); control was measured by the Locus of Control Scale (Rotter, 1966) and the Powerlessness Scale of the Alienation Test (Maddi et al., 1979); and challenge was measured by the Security Scale of the California Life Goals Evaluation Schedule (Hahn, 1966). These five scales were used almost exclusively in early hardiness research (Kobasa, et al., 1981; Kobasa, Maddi, & Kahn, 1982; Kobasa Maddi, & Pucetti, 1982). Subsequent research (Boyle et al., 1991; Keane et al., 1985; Kobasa, Maddi, & Zola, 1983; Kobasa, Maddi, & Pucetti, 1983; Rich & Rich, 1987; Weibe, 1991) used a 71-item instrument made up of the five scales previously described. A 20-item survey (Rhodewalt & Agustsdottir, 1984) and a 36-item survey (Hull et al., 1987; McCranie, et al., 1987) are also found in the literature. A third generation 50-item survey (Hardiness Institute, 1985), constructed to overcome the shortcomings of unidirectionality and negative indication, receives limited mention in the literature (Hull et al., 1987; Okun, Zautra, & Robinson, 1988; Kahn, 1987).

Kobasa (1979) reported using discriminant analysis in the construction of the original hardiness measure to identify the particular scales that discriminated low hardiness and high hardiness. There is little published material on the psychometric data or development of the
later versions of the hardiness instrument. Banks and Gannon (1988) reported the revised version was developed from factor analysis of the original scales and includes only items with a factor loading of .30 or greater. Using the data reported in various hardiness studies, Orr and Westman (1990) concluded the internal consistency (\( \alpha = 0.67 \) to 0.90; \( r = 0.60 \) to 0.89) and stability over time are acceptable for all versions of the hardiness instrument. The internal consistency reported was highest in the 50-item survey (Orr & Westman, 1990). Orr and Westman recommended the 50-item revised version of the hardiness instrument for future research because (a) the version is free from many of the previously mentioned problems and (b) research using the version is extremely limited.

Another question regarding the measurement of hardiness centers on if hardiness should be considered a unitary construct. There is a lack of agreement among researchers about whether hardiness is a single construct assessed indirectly by the subcomponent scores or whether each subcomponent interacts with the others and hardiness is more than the sum of its parts (Hull, et al., 1987; Carver, 1989; Orr & Westman, 1990).

Hull et al. (1987) concluded that hardiness was not a unitary phenomenon with the subscale of challenge having little, if any, power in the area of health outcomes. These researchers believed that computing a composite score would
obscure the contribution of each variable across situations. Carver (1989) admitted uncertainty about whether hardiness is a latent variable construct, a single quality imperfectly manifested in commitment, control, and challenge or a synergistic construct in which the value of one component builds on the power of the others.

One admittedly weak approach to testing the unity of the hardiness construct is performing factor analysis on the entire set of items. Following a detailed review of several factor analyses conducted by different researchers on the various hardiness measures, Orr and Westman (1990) concluded that the 20- and 50-item scales measure three distinct subscales and that each of the subscales is related to one unitary concept of hardiness.

The literature suggests a more definitive method of determining that hardiness is a single concept, tapped by three subscales, is by regressing health outcomes on interaction scores derived from the three subscales. The only research found by this investigator to explore the synergistic relationship of the hardiness construct suggested that commitment, control, and challenge act in an additive manner in their relationship to criterion variables rather than in a synergistic manner (Embry, 1992).

Additionally, critics of hardiness suggest that, because the hardiness measure is negatively keyed, it is possible for people with neurotic depression or anxiety to
respond similarly to both the hardiness measure and self-report measures of psychological or physical health. Thus people high in neuroticism might report increased amounts of psychological or physical illness while reporting low levels of hardiness. Funk and Houston (1987) contended the hardiness instrument does not identify persons who are hardy but merely identifies persons who are not maladjusted. These authors argued that individuals who obtain high scores on the hardiness subscales invariably be maladjusted, considering they report (a) feeling alienated from self and work, (b) feel powerless, with little control over their lives, and (c) lack feelings of security.

In a direct examination of items from the hardiness instrument, Funk and Houston (1987) pointed out the similarity between the hardiness items and items taken from three maladjustment scales: Personality Screening Inventory (Lanyon, 1970), Adjustment Inventory (Bell, 1938), and College Maladjustment (Kleinmuntz, 1960). Interestingly, the researchers based their criticism of the hardiness measure on the comparison of five items representing commitment and three items representing control. The two comparison items for challenge had no comparable items on the maladjustments scales. Though the research of Funk and Houston found a correlation between the hardiness scales and both the College Maladjustment Scales (Kleinmuntz, 1960) and the General Maladjustment scale of the Tennessee Self
Concept Scale (Fitts, 1964), the strength of the correlations failed to clearly indicate whether or not the hardiness instrument is only a measure of general maladjustment.

**Construct Validity**

Part of the definition of any concept is the ability to differentiate that concept from other related phenomena. Empirical findings about the relationship between hardiness and related constructs are limited. Orr and Westman (1990) reported four studies and Ouellette (1993) reported two which attempted to establish the construct validity of hardiness through comparisons with related concepts.

Hardiness and dispositional optimism were studied by Scheier and Carver (1985) by correlating both the long (71-item) and short (36-item) versions of the hardiness scale with the Life Orientation Test. Two separate samples of college students (N = 272) demonstrated negative correlations between both measures of hardiness and the measure of optimism. A study of hardiness, Type A behavior, and stress-illness conducted with female secretaries (N = 82) reported insignificant correlations between Type A behavior and both composite hardiness scores and the individual hardiness scales (Schmied & Lawler, 1986).

Two other studies support the construct validity of hardiness. Campbell, Amerikaner, Swank and Vincent (1989) used the third generation hardiness scale to assess for
healthy personality in 42 women. These researchers found overlap and difference between hardiness and self-actualization as measured by the Personal Orientation Inventory (Knapp, Shostrom, & Knapp, 1978). Pagana (1990) reported low, but significant, correlations between student nurses hardiness scores (N = 261) and the extent to which they perceived their first clinical experience in a medical-surgical setting as challenging.

Although the studies cited above support hardiness as a separate personality construct, studies conducted by Orr and Westman (1990) found positive relationships between hardiness and sense of coherence (Antonovosky, 1987) (r = .52) and learned resourcefulness (Rosenbaum, 1988) (r = .34). Similar correlations in the thirties were reported by Hull et al. (1987) between composite hardiness (measured by the 71-item hardiness instrument) and optimism (measured by the Life Orientation Test (Scheier & Carver, 1985). Correlations between the short version (36-item) hardiness instrument and the Life Orientation Test (Scheier & Carver, 1985) were in the twenties (Hull et al., 1987).

The lack of serious empirical investigation, such as testing the effects of hardiness and any of the three related constructs simultaneously leaves the question of the construct validity of hardiness unanswered. Clearly more research must be done in this area; however, the amount of published research showing hardiness to be a significant
positive factor in reducing burnout in nurses cannot be ignored. Further investigation of the established associations between hardiness and burnout in nurses is both justifiable and prudent despite the lack of construct validity.

**Hardiness and Demographics**

Kobasa et al. (1981), using male subjects, reports hardiness as unrelated to age, education, and job level. However, subsequent research describes inconsistent results about age and level of education. There are descriptions of positive correlations between age and hardiness (Hannah & Morrissey, 1987; Kobasa, 1982a; Nowack, 1986; Rich & Rich, 1987; Schmied & Lawler, 1986) and between educational level and hardiness (Pollock, 1986; Schmied & Lawler, 1986). These studies suggest that the relationship between hardiness and demographics may vary with the composition of the sample, especially when the sample consists of females.
CHAPTER II

METHOD AND PROCEDURES

This chapter focuses on the strategy and procedure for conducting the study, including descriptions of: (a) participants, (b) procedure for data collection, and (c) the instruments used.

Participants

The target population for this study consisted of all female nurses working full-time and part-time (N = 470) in the Nursing Services Division of a 450 bed, private, nonprofit hospital located in Dallas. The clinical units comprising the Nursing Services Division include a variety of both intensive care (neo-natal intensive care, coronary care, medical and surgical intensive care, telemetry) and non-intensive care (maternal/child, medical/surgical, mental health,) settings. Nurses in the emergency department and surgical services department were also part of the sample.

Survey packets were distributed to 440 full-time and part-time nurses. A total of 123 nurses returned survey packets for a return rate of 27.9%. A number of factors working together probably contributed to the low respondent rate: (a) distribution of the survey packets during the traditional vacation months, (b) the requirement to complete the questionnaires off-duty, (c) the number of
questionnaires to complete, and (d) the unexpected layoff of 25 nurses who had received packets. Additionally, compliance with the hospital’s Nursing Research Committee’s requirements of absolute anonymity, no devoted meetings, and non-coercion to participate made any systematic follow-up of non-respondents difficult. Moreover, the substantial cost of the survey packets precluded a second distribution of survey packets to increase respondent rate.

Considerable efforts were made to promote participation in the study. Memos were posted in each clinical unit reminding nurses to complete and return survey packets. Furthermore, announcements about the study were made by the Nurse Managers at clinical unit meetings to encourage participation. This researcher also made periodic rounds to each of the clinical units reminding the nursing staff to return completed surveys packets.

The disqualification of incomplete or incorrect survey packets yielded a final sample of 101 female nurses. Though this number represents less than one third of the nursing population of the hospital, the sample appears to be an adequate representation of the hospital’s nurses. As shown in Table 1, the percentages of respondents by departments in the sample are very similar to the percentages of nurses by department within the entire Nursing Services Division.
Table 1

Comparison of Nurses in the Nursing Services Division with Nurses Responding to the Survey

<table>
<thead>
<tr>
<th>Percent of Nurses in Nursing Services Division by Department (N = 470)</th>
<th>Percent of Nurses Responding to the Survey by Department (N = 101)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive Care 26%</td>
<td>Intensive Care 28%</td>
</tr>
<tr>
<td>Maternal Child 28%</td>
<td>Maternal Child 25%</td>
</tr>
<tr>
<td>Medical/Surgical 26%</td>
<td>Medical/Surgical 25%</td>
</tr>
<tr>
<td>Mental Health 4%</td>
<td>Mental Health 5%</td>
</tr>
<tr>
<td>Surgical Services 12%</td>
<td>Surgical Services 13%</td>
</tr>
<tr>
<td>Emergency Department 4%</td>
<td>Emergency Department 3%</td>
</tr>
</tbody>
</table>

Despite the 27.9% response rate, this sample size (N = 101) is comparable to samples generated by higher response rates in similar studies (N = 103, Boyle et al., 1985; N = 96, Keane et al., 1985; N = 107, McCranie et al., 1987; N = 100, Rich & Rich, 1987). The respondent sample was predominantly registered nurses (97%) with an average age of 40.4 years (SD = 10.6). Forty-one percent of the respondents were married. Slightly under one-half (43%) reported having a bachelor of science in nursing (BSN) degree; the remainder held an associate degree in nursing.
(28%), diploma (22%) or graduate degree (7%). The nurses reported an average of 16.6 years of nursing experience with 6.7 years tenure in their current positions and worked an average of 36.6 hours a week.

Procedure

Permission for the study was obtained from the hospital's Nursing Research Committee contingent upon the following conditions: (a) voluntary participation, (b) anonymity (no coding), (c) confidentiality, (d) no sense of harassment, and (e) the hospital not incur hourly labor costs related to the distribution, completion, or collection of the surveys.

A pilot study was conducted using staff from the hospital's Organization Development department. This selection was based on the similarity to the targeted population in gender, age, education, marital status, nursing background, and length of tenure.

Survey packets were given to each participant. This researcher emphasized the necessity of completing the surveys off-duty. Pilot study participants were given no further instructions other than to return the completed surveys within one week.

Following receipt of the completed packets, questionnaires were reviewed for (a) failure to answer questions, (b) multiple answers to the same question, and (c) written comments on any of the material. Pilot study
participants were also interviewed to get additional information about the process of completing the questionnaires including the (a) length of time to complete, (b) clarity of written instructions, and (c) any strong reaction, either positive or negative, to any of the material in the survey packet. Based on feedback from the pilot study, changes were made in the letter to participants, the completion voucher, and the directions for the COPE Inventory.

The pilot study questionnaires were scored and the data entered into the computer using the Data List command. The means and standard deviations for both hardiness and burnout for the small pilot group were noted to be comparable with the hardiness data base, the published norms for the MBI, and the published data for the COPE Inventory.

Following the conclusion of the pilot study and with the approval of hospital administration, this investigator met with the Directors of each clinical area to give a synopsis of the study. Arrangements to attend the monthly Nurse Manager meeting were made at that time.

The nurse managers received a similar overview of the study. Realizing that hourly employees may easily opt to not voluntarily return the surveys, the nurse managers were asked to help distribute and collect the survey packets. Nurse managers were recruited because Rosenthal and Rosnow (1975) recommended persons of status be used when dealing
with volunteer participants.

Each survey packet consisted of a loosely sealed manilla envelope containing: (a) participant instructions (Appendix A), (b) informed consent form (Appendix B) and return envelope, (c) demographic data sheet (Appendix C), (d) completion voucher (Appendix D), (e) Human Services Survey (Maslach Burnout Inventory), (f) Personal Views Survey (Hardiness Institute), and (g) the COPE Inventory.

The survey packets were distributed to all full-time and part-time nurses along with their paychecks. This method was selected to ensure all eligible nurses had an equal opportunity to participate in the study. The nurses were given one week to complete the questionnaires. Due to the unexpected number of nurses on vacation or required leave at the time of survey distribution, the deadline for returning the survey packets was extended to three weeks.

Respondents returning completed survey packets within the required three week time frame were eligible for a free gift. Five gift certificates, each good for $20.00 of gasoline, were awarded in a drawing.

Instruments

Three instruments were used in this study. The *Maslach Burnout Inventory* (MBI) for human services (Maslach & Jackson, 1986) was used to measure degree of burnout. Hardiness was measured by the third generation hardiness instrument or Personal Views Survey (Hardiness Institute,
Coping style was measured by the COPE Inventory developed by Carver, Scheier, & Weintraub (1989).

**Maslach Burnout Inventory (MBI)**

The **Maslach Burnout Inventory** (subtitled Human Services Survey) is a 22-item survey designed to measure three aspects of burnout: (a) emotional exhaustion, (b) depersonalization, and (c) lack of personal accomplishment. The Emotional Exhaustion subscale consists of nine items that assess feelings of being emotionally overextended and exhausted by one's work. The five items of the Depersonalization subscale measure an unfeeling and impersonal response toward recipients of one's service, care, treatment, or instruction. For both the Emotional Exhaustion and Depersonalization subscales, higher scores correspond to higher degrees of experienced burnout. The Personal Accomplishment subscale contains eight items to assess feelings of competence and achievement in one's work with people. In contrast to the other two subscales, lower scores on this subscale correspond to higher degrees of experienced burnout (Maslach & Jackson, 1986).

The structured questionnaire is self-administered for literate adults and takes about 15 minutes to complete. Detailed instructions for the respondent that include an example item are provided in the survey. Participants were asked to respond to each statement about personal feelings and attitudes toward work using a six-point Likert-type
scale according to the frequency of the job-related feeling. A separate score was calculated for each of the three dimensions of burnout, emotional exhaustion, depersonalization, and personal accomplishment.

Internal consistency for the MBI is estimated by Cronbach's coefficient alpha (N = 1,316). The reliability coefficients for the subscales were as follows: .90 for Emotional Exhaustion; .79 for Depersonalization; and .71 for Personal Accomplishment. Standard errors of measurement ranged from 3.16 to 3.80. Test/retest reliability (2–4 weeks apart) ranged from .60 to .82 while test/retest reliability (1 year apart) ranged from .54 to .60. Thus reliability of the MBI seems adequately demonstrated (Dowd, 1985).

Two items of validity data are provided in the MBI manual, convergent and discriminant. The authors provided a variety of validity studies. Individual's MBI scores were correlated with: (a) behavioral ratings made by independent observers (co-workers and spouses), (b) the presence of certain job characteristics expected to contribute to experienced burnout, and (c) hypothesized relationships between burnout and various personal reactions such as desire to leave one's job, difficulties with family and friends, and increased use of alcohol (Maslach & Jackson, 1986).

The MBI is the most widely used measurement of burnout.
(Lee & Ashforth, 1990) among burnout researchers; however, the MBI has been used infrequently in the study of burnout in nurses. The Staff Burnout Scales for Health Professionals (SBS-HP) developed by Jones (1980) is used most often in burnout research among nurses.

**Personal Views Survey**

The third generation hardiness instrument (entitled the Personal Views Survey) provides a brief (50 items) measure of the construct personality hardiness. The instrument, appropriate for literate adults and adolescents, can be completed in less than 10 minutes. Items are written as statements about personal feelings, attitudes, and opinions. Participants responded on a four point Likert-type scale according to how true the statement was for them.

The three components of hardiness, commitment, control, and challenge, are integrated throughout the survey with 16 items relating to commitment, 17 items relating to control, and 17 items relating to challenge. A score was calculated for total hardiness and each dimension of hardiness using the revised scoring procedure (Hardiness Institute, 1989). Estimates of internal consistency for the Hardiness Instrument have yielded an alpha coefficient of .92 (N = 21,000) for total hardiness score and of .91, for commitment, .90 for control, and .89 for challenge (S. Dane, personal communication, March, 1992). A reliability study based on test/retest of over 400 subjects shows an item to
item correlation of .93 for the individual items (S. Dane, personal communication, March 1992).

**COPE Inventory**

The COPE Inventory, a brief 60-item questionnaire, was used to measure coping style (Carver et al., 1989). The COPE is intended to measure a set of responses that may potentially impede or interfere with active coping. Like other existing coping instruments, the COPE assesses active coping efforts; unlike other instruments the COPE distinguishes several distinct aspects of active coping such as planning and suppression of attention of competing activities.

The COPE uses 15 different subscales to measure different aspects of active coping. The 15 coping styles measured by the COPE are: (1) positive reinterpretation and growth, (2) active coping, (3) planning, (4) seeking social support for emotional reasons, (5) seeking social support for instrumental reasons, (6) suppression of competing activities, (7) religion, (8) acceptance, (9) mental disengagement, (10) focus on and venting of emotions, (11) behavioral disengagement, (12) denial, (13) restraint coping, (14) alcohol/drug use, (15) humor. Scales 1, 2, 5, 7, and 8 measure tendencies that presumably should be adaptive in circumstances where active coping efforts yield good outcomes. Scales 3, 4, and 6 measure tendencies not associated with active coping, but there is evidence to
suggest they should also be adaptive. Scales 10, 11, 12, and 13 measure tendencies that should be maladaptive in situations where active coping efforts are required to yield good outcomes. Scale 9 measures a tendency less dysfunctional, but still maladaptive. Scales 14 and 15 were developed after the other scales and are considered exploratory (Personal communication, C. Carver, March, 1993). However, scale 14 is clearly maladaptive. Humor, also considered exploratory by Carver et al. (1989), is considered maladaptive in this study because the statements contained in the humor subscale describe humor as making light of the situation without any associated action.

The possible score on each subscale ranges from 4 to 16.

There are at least two relatively clear pairs of polar-opposite tendencies represented in the subscales: Denial is antithetical to Acceptance, and Active Coping is antithetical to Behavioral Disengagement. The opposing scales were included in the instrument separately because (a) each scale as written is unipolar (the absence of one tendency does not imply the presence of the other), and (b) it is not unusual for people to vacillate between opposing tendencies when attempting to cope with a stressful situation (C. Carver, personal communication, March, 1993).

Items on the COPE are written as statements about personal actions and feelings related to experiencing stressful events. Statements are phrased in a trait form
rather than in a situational format. The instructions for the COPE were modified to emphasize stressful events at work. Participants responded on a four point Likert-type scale according to how true the statement was for them. Respondents were instructed to respond to each statement separate from the others and to answer each question thoughtfully. A score for each coping style was obtained by summing the unweighted responses to the four items comprising that coping style subscale.

A principal factor analysis conducted on the responses of 978 college undergraduates produced 12 factors with eigenvalues greater than 1.0 (Carver et al., 1989). One item pertaining to drug and alcohol use did not load on any of the factors presented in the research version of the COPE. However, the item was retained and expanded, and now comprises a subscale used for exploratory purposes.

Evidence concerning the test-retest reliability of the COPE comes from two separate samples of college undergraduates (N = 89; N = 116) who completed the COPE at 8 week and 6 week intervals respectively. Carver et al. (1989) reported Cronbach’s alpha coefficients ranging from a low of .45 (Mental Disengagement) to a high of .92 (Turning to Religion). These correlation coefficients suggest that self-reports of coping behaviors are relatively stable, although they do not appear to be as stable as personality traits.
The convergent and discriminant validity of the COPE is supported by the patterns of associations found when the COPE was correlated with selected personality measures. Though the COPE correlated with some personality variables, the correlations were not overly strong, e.g., .10, .14, .22, .28. Furthermore, the COPE was unrelated to the social desirability scales and to another measure of coping style, monitoring and blunting (Carver et al., 1989). This suggests the two instruments are complementary to each other and are not measuring similar qualities of coping.

Though it is probably best to consider the COPE still in the research stage, the COPE offers several advantages over other existing coping instruments. First, the statements on the COPE are clearly focused; second, there is no ambiguity in the statements from conflicting or conceptually distinct qualities; third, the COPE is a theoretically based instrument generated from the Lazarus model of stress, the behavioral self-regulation model (Carver & Scheier, 1981; 1983; 1985), and the body of research findings generated from previous measures of coping; and fourth, the COPE discriminates among various types of coping styles that are part of broad categories.
CHAPTER III

RESULTS AND DISCUSSION

This chapter presents results of the study, including characteristics of the sample and details of the data analysis concerning each of the eight hypotheses investigated. The chapter concludes with a discussion of the results, implications for practice, and recommendations for further investigation.

Characteristics of the Sample

Descriptive statistics for two of the major variables under investigation, hardiness and burnout, are presented in Table 2. The sample means and standard deviations for hardiness and its components are comparable to the means and standard deviations of the hardiness data base (N = 21,000; Hardiness M = 74.02, SD = 9.6; Commitment M = 38; SD = 5.05; Control M = 39; SD = 4.33; Challenge M = 34; SD = 5.26) (S. Dane, personal communication, March 12, 1992).

A comparison of the sample means and standard deviations for emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA) to those of the medicine subscale of the Maslach Burnout Inventory (N = 1104, EE M = 22.9; SD = 9.55; DP M = 7.12, SD = 5.22; PA M = 36.53, SD = 7.84) (Maslach & Jackson, 1986), shows slightly lower sample scores for emotional exhaustion and
depersonalization and slightly higher sample scores for personal accomplishment. These findings suggest the nurses in this sample experience lower burnout than do other medical professionals. However, a comparison of the sample scores on emotional exhaustion, depersonalization, and personal accomplishment with the medicine subgroup scores, using the categorization of low, average, and high burnout, showed the sample falls within the average range of burnout.

Table 2
Means and Standard Deviations for Hardiness, Its Components, and Burnout
(N = 101)

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardiness (Composite) (HARDY)</td>
<td>75.07</td>
<td>8.00</td>
</tr>
<tr>
<td>Commitment (COMMIT)</td>
<td>39.05</td>
<td>4.88</td>
</tr>
<tr>
<td>Control (CONTROL)</td>
<td>40.46</td>
<td>4.43</td>
</tr>
<tr>
<td>Challenge (CHALL)</td>
<td>32.90</td>
<td>5.23</td>
</tr>
<tr>
<td>Burnout</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Exhaustion (EE)</td>
<td>19.39</td>
<td>10.60</td>
</tr>
<tr>
<td>Depersonalization (DP)</td>
<td>6.13</td>
<td>5.90</td>
</tr>
<tr>
<td>Personal Accomplishment (PA)</td>
<td>37.63</td>
<td>7.04</td>
</tr>
</tbody>
</table>

Table 3 presents means and standards deviations of the study sample along with the published means and standards
### Table 3

**Sample Means and Standard Deviations Compared with Published Means and Standard Deviations for Dispositional COPE Scales**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sample (N = 101)</th>
<th>College Students (N = 1030)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Adaptive Coping Styles</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Reinterpretation and Growth</td>
<td>11.97</td>
<td>2.43</td>
</tr>
<tr>
<td>Active Coping</td>
<td>12.14</td>
<td>2.12</td>
</tr>
<tr>
<td>Planning</td>
<td>12.95</td>
<td>2.54</td>
</tr>
<tr>
<td>Seeking Social Support for Emotional Reasons</td>
<td>11.46</td>
<td>2.80</td>
</tr>
<tr>
<td>Seeking Social Support for Instrumental Reasons</td>
<td>11.97</td>
<td>2.45</td>
</tr>
<tr>
<td>Suppression of Competing Activities</td>
<td>10.11</td>
<td>2.16</td>
</tr>
<tr>
<td>Religion</td>
<td>10.64</td>
<td>4.52</td>
</tr>
<tr>
<td>Acceptance</td>
<td>11.37</td>
<td>2.15</td>
</tr>
</tbody>
</table>


(table continues)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Sample ( (N = 101) )</th>
<th>College Students ( (N = 1030) )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( M )</td>
<td>( SD )</td>
</tr>
<tr>
<td>Maladaptive Coping Styles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Disengagement</td>
<td>8.46</td>
<td>2.22</td>
</tr>
<tr>
<td>Focus On and Venting Of Emotions</td>
<td>9.77</td>
<td>2.69</td>
</tr>
<tr>
<td>Behavioral Disengagement</td>
<td>6.14</td>
<td>1.89</td>
</tr>
<tr>
<td>Denial</td>
<td>5.35</td>
<td>1.75</td>
</tr>
<tr>
<td>Restraint Coping</td>
<td>10.51</td>
<td>2.24</td>
</tr>
<tr>
<td>Alcohol/Drug Use</td>
<td>4.36*</td>
<td>1.46</td>
</tr>
<tr>
<td>Humor</td>
<td>4.36</td>
<td>3.05</td>
</tr>
</tbody>
</table>

Note. The data for college students are from "Assessing Coping Strategies: A Theoretically Based Approach" by C. S. Carver, M. F. Scheier, and J. K. Weintraub, 1989. Journal of Personality and Social Psychology, 56. The range of scores differs for the sample and the college students. *Range of possible scores 1 - 4. The means of the study sample are comparable to the means of the student group except for suppression of competing activities and religion which are higher for the study sample. In addition, the study sample shows a pattern of coping similar to the college student group. Nurses in the present study reported using coping styles that theoretically are adaptive (active coping, planning,
positive reinterpretation and growth) to a greater extent than they reported using coping styles that theoretically may become less adaptive (behavioral and mental disengagement) over time.

Despite the similarities between the two sets of means, the two groups have major differences. First, the study sample was comprised entirely of women while the college student group included both men and women. Second, the sample consisted exclusively of working professionals reporting on coping styles used to deal with occupational stress while the college student group contained undergraduates reporting on ways of dealing with generalized stress.

The raw correlations among the major variables in this study and selected demographic variables not addressed in this study, but shown to be related to hardiness and burnout in some earlier studies are displayed in Table 4. Though previous research showed significant relationships between age, education, and marital status with both hardiness (Kobasa, 1982; Kobasa et al., 1982; Nowack, 1986; Okun, Zautra, & Robinson, 1988; Pollock, 1986; Schmied & Lawler, 1986; Rich & Rich, 1987) and burnout (Ivancevich, Matteson,
Table 4

Correlation Matrix for Hardiness and Its Components, Burnout and Selected Demographics

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>7</th>
<th>8</th>
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<th>10</th>
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<tbody>
<tr>
<td>1. Age</td>
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<tr>
<td>2. Education</td>
<td>-0.264**</td>
<td>1.00</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>3. Marital Status</td>
<td></td>
<td>-0.016</td>
<td>0.087</td>
<td>1.00</td>
<td></td>
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<tr>
<td>4. HARDY</td>
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<tr>
<td>5. COMMIT</td>
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<td>6. CONTROL</td>
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<td>7. CHALL</td>
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<td>8. EE</td>
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<tr>
<td>9. DP</td>
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<tr>
<td>10. PA</td>
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</tbody>
</table>

Note. HARDY = Composite hardiness, COMMIT = Commitment, CONTROL = Control, CHALL = Challenge, EE = Emotional Exhaustion, DP = Depersonalization, PA = Personal Accomplishment.

*p < .05, one-tailed; **p < .01, one-tailed; ***p < .001, one-tailed
Freedman, & Phillips, 1990), only education and hardiness show a significant positive relationship ($r = .198, p < .001$) in this sample.

The significant negative correlations found between EE, DP and hardiness, coupled with the significant positive correlation between PA and hardiness suggest hardiness and burnout are inversely related in this sample. This finding is consistent with several studies of hardiness and burnout in hospital nurses (Boyle, et al., 1991; Keane, et al., 1985; McCranie, et al., 1987; Rich & Rich, 1987), that show hardiness and burnout are inversely related, i.e., high hardy nurses reported lower burnout than low hardy nurses.

Table 5 displays the raw correlations between the major variables in this study and the average hours worked per week, average years of nursing experience, and average length of time in the current nursing position. Significant positive correlations were found between hours worked and both years of nursing experience and personal accomplishment. This data suggest that the length of time spent in the nursing profession and feelings of personal accomplishment are related to the amount of hours worked. A significant negative correlation was found between years of nursing experience and emotional exhaustion. The negative correlation between years of nursing experience and depersonalization was only slightly above (.06) the .05 level of significance set for this study. This is also true
Table 5

Correlation Matrix for Hardiness and Its Components, Burnout, Hours Worked per Week, Years of Nursing Experience, and Length of Time in Current Position

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. HOURS</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. YRS. EXP.</td>
<td>.174*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. TENURE</td>
<td>-.067</td>
<td>.036</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. HARDY</td>
<td>.048</td>
<td>-.019</td>
<td>-.080</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. COMMIT</td>
<td>-.020</td>
<td>.006</td>
<td>-.053</td>
<td>.886***</td>
<td>1.00</td>
<td></td>
<td></td>
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<tr>
<td>6. CONTROL</td>
<td>.065</td>
<td>.053</td>
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<td>.645***</td>
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<tr>
<td>7. CHALL</td>
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<td>-.049</td>
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<td>.536***</td>
<td>.372***</td>
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<td>8. EE</td>
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<td>-.163*</td>
<td>-.159</td>
<td>-.349***</td>
<td>-.418***</td>
<td>-.264**</td>
<td>-.178*</td>
<td>1.00</td>
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<tr>
<td>9. DP</td>
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<td>-.158</td>
<td>-.126</td>
<td>-.317***</td>
<td>-.373***</td>
<td>-.142</td>
<td>-.251**</td>
<td>.683***</td>
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<td></td>
</tr>
<tr>
<td>10. PA</td>
<td>.161*</td>
<td>.069</td>
<td>.015</td>
<td>.544***</td>
<td>.507***</td>
<td>.418***</td>
<td>.417***</td>
<td>-.438***</td>
<td>-.347***</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. HOURS = Hours worked per week, YRS. EXP. = Years of Nursing Experience, TENURE = Length of Time in Current Position, HARDY = Hardiness, COMMIT = Commitment, CONTROL = Control, CHALL = Challenge, EE = Emotional Exhaustion, DP = Depersonalization, PA = Personal Accomplishment. *p ≤ .05, one-tailed; **p < .01, one-tailed; ***p ≤ .001, one-tailed
for the negative correlation between tenure and emotional exhaustion \( r = -.159, p = .06 \).

**Analysis of Hypotheses**

Hypotheses 1 stated a low level of commitment, control, and challenge would predict emotional exhaustion (EE) and depersonalization (DP). This hypothesis was tested using a regression procedure. EE was entered first as a criterion variable with commitment, control, and challenge entered as predictor variables. As shown in Table 6, commitment, control, and challenge yielded a multiple correlation of \( R = .422 \) and an \( R^2 = .178 \) \( (F (3, 97) = 7.00, p = .000) \). Thus the three components of hardiness combined account for approximately 18% of the variance in emotional exhaustion. Therefore, the three components of hardiness combined can be considered significant predictors of emotional exhaustion.

Further examination of the three predictor variables using Beta weights, shows commitment accounts for almost half \( (\beta = -.458) \) of the explained variance in emotional exhaustion. Control and challenge show no significant contribution to emotional exhaustion. In light of this data, a low level of commitment is considered the best predictor of emotional exhaustion for this sample.
Table 6

Regression Analysis Summary of Three Predictor Variables on Emotional Exhaustion

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>r</th>
<th>Beta</th>
<th>Multi R</th>
<th>R^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Challenge</td>
<td>-0.177</td>
<td>-0.177</td>
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<td></td>
</tr>
<tr>
<td>2.</td>
<td>Control</td>
<td>-0.263</td>
<td>-0.229</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Commitment</td>
<td>-0.418</td>
<td>-0.458*</td>
<td>0.422</td>
<td>0.178</td>
</tr>
</tbody>
</table>

*p = .000

The second part of the hypothesis [a low level of commitment, control, and challenge will predict (DP)] was tested by a second regression procedure with DP entered as the criterion and commitment, control, and challenge entered as the predictors. This time commitment, control, and challenge exhibited a multiple correlation of \( R = 0.399 \) and an \( R^2 = 0.159 \) (\( F(3, 97) = 6.14, p = .000 \)). Thus, commitment, control, and challenge together account for approximately 16% of the variance in depersonalization (see Table 7). Therefore a low level of commitment, control, and challenge can also be considered a significant predictor of depersonalization.

Once again, an examination of the three individual predictors using Beta weights, shows commitment (\( \beta = -0.441 \)) accounts for almost half (44%) the explained variance in depersonalization with control and challenge contributing little, if any, to depersonalization. The data suggest a
low level of commitment is also the best predictor of depersonalization.

Table 7

Regression Analysis Summary of Three Predictor Variables on Depersonalization

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>Beta</th>
<th>r</th>
<th>Multi R</th>
<th>R Sq</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Challenge</td>
<td>-.251</td>
<td>-.251</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Control</td>
<td>-.056</td>
<td>-.142</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Commitment</td>
<td>-.441*</td>
<td>-.372</td>
<td>.399</td>
<td>.159</td>
</tr>
</tbody>
</table>

*p = .000

To test Hypothesis 2 [commitment, control, and challenge will positively predict personal accomplishment (PA)] PA was entered into the regression as the criterion variable and commitment, control, and challenge were entered as predictors.

Table 8 shows the regression analysis for Hypothesis 2. Thirty percent of PA is accounted for by commitment, control, and challenge ($R^2 = .299, F (3, 97) = 13.8, p = .000$). Accordingly, the combined components of hardiness can be considered significant positive predictors of personal accomplishment. An examination of the Beta weights shows both commitment ($\beta = .305$) and challenge ($\beta = .198$) are significant contributors to personal accomplishment. Therefore a sense of commitment and a sense of challenge may both be considered positive predictors of
personal accomplishment.

Table 8
Regression Analysis Summary of Three Predictor Variables on Personal Accomplishment

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>Beta</th>
<th>r</th>
<th>Multi R</th>
<th>R Sq</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</tr>
<tr>
<td>2.</td>
<td>Control</td>
<td>.147</td>
<td>.418</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Commitment</td>
<td>.305**</td>
<td>.506</td>
<td>.547</td>
<td>.299</td>
</tr>
</tbody>
</table>

*p = .05, **p = .01

Two of the eight hypotheses developed for this study addressed the relationship among hardiness, its component, and coping styles. The data for these two hypotheses are presented in correlation matrices (see Table 9 and Table 10). The first of these hypotheses (Hypothesis 3) stated composite hardiness and its individual components (commitment, control, and challenge) would be positively related to coping styles of: (a) positive reinterpretation and growth, (b) active coping, (c) planning, (d) seeking social support for instrumental reasons, (e) acceptance, (f) seeking social support for emotional reasons, (g) suppression of competing activities, and (h) religion. Hypothesis 3 was tested by correlations generated from a regression procedure. Table 9 presents the correlations among composite hardiness, its respective components, and adaptive coping styles.
As shown in Table 9, significant positive correlations ranging from .191 to .335 exist between hardiness and (a) positive reinterpretation and growth, (b) active coping, (c) planning, and (d) seeking social support for instrumental reasons. No significant relationship was found between hardiness and either (f) seeking social support for emotional reasons, (g) suppression of competing activities, or (h) religion. The relationship between hardiness and (e) acceptance ($r = .147$, $p = .07$) was outside the level of significance set for this study. In summary, composite hardiness showed significant positive relationships with 4 of the 8 adaptive coping styles listed.

Commitment, control, and challenge were also hypothesized to be positively related to coping styles of: (a) positive reinterpretation and growth, (b) active coping, (c) planning, (d) seeking social support for instrumental reasons, (e) acceptance, (f) seeking social support for emotional reasons, (g) suppression of competing activities, and (h) religion. Commitment and control were equally significant; however, challenge was less often significant. The components of hardiness followed a similar pattern to composite hardiness in their relationship to the coping styles. Table 9 illustrates positive correlations between commitment and four adaptive coping styles, control and four
Table 9

Correlations Among Hardiness, Components of Hardiness, and Adaptive Coping Style

<table>
<thead>
<tr>
<th></th>
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<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
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</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>CONTROL</td>
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<td>.645***</td>
<td>1.00</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>CHALL</td>
<td>.789***</td>
<td>.536***</td>
<td>.372***</td>
<td>1.00</td>
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<tr>
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<td>.203*</td>
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<tr>
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<td>.236**</td>
<td>.199*</td>
<td>.044</td>
<td>.558***</td>
<td>1.00</td>
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<tr>
<td>7</td>
<td>PLAN</td>
<td>.241**</td>
<td>.272**</td>
<td>.230**</td>
<td>.101</td>
<td>.638***</td>
<td>.738***</td>
<td>1.00</td>
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</tr>
<tr>
<td>8</td>
<td>SSSER</td>
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<td>.073</td>
<td>.073</td>
<td>-.065</td>
<td>.380***</td>
<td>.317***</td>
<td>.358***</td>
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<tr>
<td>9</td>
<td>SSSIR</td>
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<td>.296***</td>
<td>.296***</td>
<td>.132</td>
<td>.567***</td>
<td>.572***</td>
<td>.618***</td>
<td>.637***</td>
<td>1.00</td>
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<td>SCA</td>
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<td>-.021</td>
<td>-.038</td>
<td>.389***</td>
<td>.489***</td>
<td>.523***</td>
<td>.251**</td>
<td>.382***</td>
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<td>-.045</td>
<td>-.065</td>
<td>-.04</td>
<td>.169*</td>
<td>.117</td>
<td>.229**</td>
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<td>-.019</td>
<td>.148</td>
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<td>.115</td>
<td>.124</td>
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<td>.339***</td>
<td>.444***</td>
<td>.131</td>
<td>.291**</td>
<td>.279**</td>
<td>.171*</td>
</tr>
</tbody>
</table>

Note. HARDY = Composite hardness, COMMIT = Commitment, CONTROL = Control, CHALL = Challenge, AC = Active coping, PRS = Positive reinterpretation and growth, PLAN = Planning, SSSER = seeking social support for emotional reasons, SSSIR = Seeking social support for instrumental reasons, SCA = Suppression of competing activities, REL = Religion, ACCEPT = Acceptance.

*P < .05, one-tailed; **P < .01, one tailed; ***P < .001, one tailed.
adaptive coping styles, and challenge and one adaptive
coping style. Commitment shows positive correlations with (3a) positive reinterpretation and growth, (3b) active
coping, (3c) planning, and (3d) seeking social support for
instrumental reasons. The positive correlation between
commitment and (3f) seeking social support for emotional
reasons \( (r = .157, p = .06) \) is at a level of significance
slightly above the .05 level set apriori. Control and (3a)
positive reinterpretation and growth, (3b) active coping,
(3c) planning, and (3d) seeking social support for
instrumental reasons show positive correlations well within
the level of significance set for this study. Challenge
shows a significant positive correlation with only (3b)
active coping. Because composite hardiness and the
components of hardiness are significantly related to only
some of the adaptive coping styles (see Table 9) Hypothesis
3 is only partially supported.

Hypothesis 4 stated composite hardiness would be
negatively related to coping styles of: (a) mental
disengagement, (b) behavioral disengagement, (c) focus on
and venting of emotions, (d) denial, (e) restraint coping,
(f) alcohol/drug use, and (g) humor. Hypothesis 4 is
partially supported by the data shown in Table 10.
Significant negative relationships exist between hardiness
and the coping styles of (4b) behavioral disengagement,
(4c) focus on and venting of emotions, (4d) denial, and (4f)
alcohol/drug use. No significant relationships were found between composite hardiness and either (4a) mental disengagement, (4e) restraint coping, or (4g) humor.

Hypothesis 4 also postulated commitment, control, and challenge would be negatively related to: (a) mental disengagement, (b) behavioral disengagement, (c) focus on and venting of emotions, (d) denial, (e) restraint coping, (f) alcohol/drug use, and (g) humor. As shown in Table 10, the three hardiness components show significant correlations in the expected direction with (4b) behavioral disengagement. No significant relationships were found between the three components of hardiness and either (4a) mental disengagement or (4e) restraint coping. Commitment and challenge, respectively, show expected negative correlations with (4c) focus on and venting of emotions and (4f) alcohol/drug use. Control also shows a negative correlation with (4c) focus on and venting of emotions ($r = -0.137$, $p = 0.08$) somewhat above the level of significance set for this study. In addition, commitment is significantly negatively related to (4d) denial. The negative correlation between challenge and (4d) denial ($r = -0.146$, $p = 0.072$) is outside the level of significance set for this study. Challenge shows a significant correlation
Table 10
Correlations Among Hardiness, Components of Hardiness, and Maladaptive Coping Style

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
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<th>10</th>
<th>11</th>
</tr>
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</tr>
<tr>
<td>2.</td>
<td>COMMIT</td>
<td>.886***</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td>3.</td>
<td>CONTROL</td>
<td>.794***</td>
<td>.645***</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>4.</td>
<td>CHALL</td>
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<td>.536***</td>
<td>.372***</td>
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<tr>
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<tr>
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<td>FOV/EO</td>
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<td>-.267**</td>
<td>.050</td>
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<tr>
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<td>-.334***</td>
<td>-.240**</td>
<td>-.279**</td>
<td>-.400***</td>
<td>.163*</td>
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<td>8.</td>
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<td>-.225**</td>
<td>-.140</td>
<td>-.146</td>
<td>.449***</td>
<td>.123</td>
<td>.432***</td>
<td>1.00</td>
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<tr>
<td>9.</td>
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<td>.052</td>
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<td>.195*</td>
<td>.104</td>
<td>.050</td>
<td>.239***</td>
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</tbody>
</table>

Note. HARDY = Composite Hardiness, COMMIT = Commitment, CONTROL = Control, CHALL = Challenge, MD = Mental disengagement, BD = Behavioral disengagement, FOV/EO = Focus on and venting of emotions, DEN = Denial, RC = Restraint coping, AL/DRG = Alcohol/Drug use.

*p ≤ .05, one tailed; **p ≤ .01, one tailed; ***p < .001, one tailed.
with (4g) humor ($r = .165, p = .049$) but not in the expected negative direction. Because composite hardiness and its individual components are related to only some of the maladaptive coping styles listed (see Table 10), Hypothesis 4 is only partially supported.

The final four hypotheses deal with the relationship between the components of burnout and coping style. Correlations relevant to Hypotheses 5 and 6 are displayed in Table 11 and Table 12.

Hypothesis 5, which stated emotional exhaustion and depersonalization would be negatively related to coping styles of: (a) positive reinterpretation and growth, (b) active coping, (c) planning, (d) seeking social support for instrumental reasons, (e) acceptance, (f) seeking social support for emotional reasons, (g) suppression of competing activities, and (h) religion, is largely unsupported. As shown in Table 10, only depersonalization was found to be negatively related to (5b) active coping. No other significant relationships were found between the other adaptive coping styles and emotional exhaustion and depersonalization (see Table 11).
Table 11

Correlations Among Components of Burnout and Adaptive Coping Styles

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
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<td></td>
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<td>.638***</td>
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<td>.090</td>
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<td>.317***</td>
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<tr>
<td>9 SCA</td>
<td>-.067</td>
<td>.016</td>
<td>.168*</td>
<td>.389***</td>
<td>.469***</td>
<td>.523***</td>
<td>.251**</td>
<td>.382***</td>
<td>1.00</td>
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<tr>
<td>10 REL</td>
<td>-.108</td>
<td>-.141</td>
<td>-.096</td>
<td>.169*</td>
<td>.117</td>
<td>.229**</td>
<td>-.099</td>
<td>-.019</td>
<td>.148</td>
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<tr>
<td>11 ACCEPT</td>
<td>-.017</td>
<td>.067</td>
<td>.186*</td>
<td>.429***</td>
<td>.339***</td>
<td>.444***</td>
<td>.131</td>
<td>.291**</td>
<td>.279**</td>
<td>.171*</td>
<td>1.00</td>
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</tbody>
</table>

Note: EE = Emotional exhaustion, DP = Depersonalization, PA = Personal accomplishment, AC = Active coping, FGC = Positive reinterpretation and growth, PLAN = Planning, SSSER = Seeking social support for emotional reasons, SSSIR = Seeking social support for instrumental reasons, SCA = Suppression of competing activities, REL = Religion, ACCEPT = Acceptance.

*p < .05, one-tailed; **p < .01, one-tailed; ***p ≤ .001, one-tailed
Emotional exhaustion and depersonalization were thought to be positively related to coping styles of: (a) mental disengagement, (b) behavioral disengagement, (c) focus on and venting of emotions, (d) denial, (e) restraint coping, (f) alcohol/drug use, and (g) humor (Hypothesis 6). Only two of these maladaptive coping styles, (6c) focus on and venting of emotions and (6f) alcohol/drug use, respectively, show significant positive relationships to emotional exhaustion and depersonalization (see Table 12). All the other maladaptive coping styles show no significant relationship to either emotional exhaustion or depersonalization. Thus Hypothesis 6 is also largely unsupported.

The final two hypotheses considered the third component of burnout and its relationship to coping style. Personal accomplishment was expected to show positive relationships with coping styles of: (a) positive reinterpretation and growth, (b) active coping, (c) planning, (d) seeking social support for instrumental reasons, (e) acceptance, (f) seeking social support for emotional reasons, (g) suppression of competing activities, and (h) religion (Hypothesis 7). Table 11 shows personal accomplishment to have significant positive correlations with (7b) active coping, (7c) planning, (7d) seeking social support for instrumental reasons, (7e) acceptance, and (7g) suppression of competing activities. Of these five adaptive coping
styles, active coping shows the highest correlation ($r = .384, p = .000$) with personal accomplishment. The remaining three adaptive coping styles, (7a) positive reinterpretation and growth, (7f) seeking social support for emotional reasons and (7g) religion, show no significant relationship to personal accomplishment (see Table 11). Therefore, Hypothesis 7 is only partially supported.

Hypothesis 8 stated personal accomplishment would be negatively related to coping styles of: (a) mental disengagement, (b) behavioral disengagement, (c) focus on and venting of emotions, (d) denial, (e) restraint coping, (f) alcohol/drug use, and (g) humor. As shown in Table 12, only two of these maladaptive coping styles exhibit significant negative relationships to personal accomplishment. Personal accomplishment and (8c) focus on and venting of emotions ($r = -.200, p = .02$) are correlated as expected. However, (8g) humor shows an unexpected positive relationship ($r = .216, p = .01$) to personal accomplishment. Because only two of the seven maladaptive coping styles show the expected negative correlations with personal accomplishment, and because personal accomplishment shows a positive correlation with humor, Hypothesis 8 is largely unsupported.
Table 12

Correlations Among Components of Burnout and Maladaptive Coping Style

<table>
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<tr>
<td>1.</td>
<td>EE</td>
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<td>PA</td>
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<td>-.347***</td>
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<tr>
<td>4.</td>
<td>MD</td>
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<tr>
<td>5.</td>
<td>FVUE</td>
<td>.383***</td>
<td>.421***</td>
<td>-.200*</td>
<td>.050</td>
<td>1.00</td>
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<tr>
<td>6.</td>
<td>BD</td>
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<td>.079</td>
<td>-.032</td>
<td>.400***</td>
<td>.163*</td>
<td>1.00</td>
<td></td>
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<tr>
<td>7.</td>
<td>DEN</td>
<td>.056</td>
<td>-.051</td>
<td>.106</td>
<td>.449***</td>
<td>.123</td>
<td>.432***</td>
<td>1.00</td>
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<tr>
<td>8.</td>
<td>RC</td>
<td>-.061</td>
<td>.037</td>
<td>-.061</td>
<td>.136</td>
<td>.051</td>
<td>.052</td>
<td>.065</td>
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<tr>
<td>9.</td>
<td>AL/DRG</td>
<td>.333***</td>
<td>.241**</td>
<td>-.119</td>
<td>-.090</td>
<td>.301***</td>
<td>.222*</td>
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<td>HUMOR</td>
<td>.051</td>
<td>-.069</td>
<td>.216**</td>
<td>.154</td>
<td>.195*</td>
<td>.104</td>
<td>.050</td>
<td>.239***</td>
<td>-.015</td>
</tr>
</tbody>
</table>

Note. EE = Emotional exhaustion, DP = Depersonalization, PA = Personal accomplishment, MD = Mental disengagement, FVUE = Focus on and venting of emotions, BD = Behavioral disengagement, DEN = Denial, RC = restraint coping, AL/DRG = Alcohol/Drug use.

* p < .05, one tailed; **p < .01, one tailed; ***p < .001, one tailed
Summary of Results

This study was designed to investigate relationships among and between respective components of hardiness (commitment, control, and challenge) and respective components of burnout (emotional exhaustion, depersonalization, and personal accomplishment) in female hospital nurses. An additional objective was to inquire into relationships between coping style and hardiness and burnout, respectively, in the same sample.

The results of this study supported the assumption that components of hardiness are predictive of components of burnout. Additionally, the data showed hardiness is positively related to coping styles which actively attempt to solve or alter the stressful situation. Coping styles which attempt to minimize the stressful situation without actually resolving it were negatively related to hardiness. The components of hardiness followed a similar pattern in their relationship to coping styles. Commitment was the most consistent of the three components, showing significant positive relationships with 5 of the 8 adaptive coping styles and significant negative relationships with 4 of the 7 maladaptive coping styles. Control and challenge each were related to five coping styles. Significant positive correlations were found between control and four adaptive coping styles and between challenge and one adaptive coping style. Control showed a significant negative correlation
with one maladaptive coping style, behavioral disengagement. Challenge showed significant negative correlations with three maladaptive coping styles. An unexpected significant positive correlation was found between the maladaptive coping style, humor, and challenge.

Generally, the components of burnout appeared unrelated to coping style. Emotional exhaustion and depersonalization, though seemingly unrelated to most of the coping styles, showed positive relationships with two emotion-focused coping styles and a negative relationship with one problem-focused coping style. Personal accomplishment displayed significant positive relationships with five adaptive coping styles which reflect both problem-focused and emotion-focused coping. One maladaptive, emotion-focused coping style, humor, showed a significant positive relationship to personal accomplishment.

Discussion, Implications, and Recommendations

Like previous studies which examined relationships between hardiness and burnout in hospital nurses (Boyle et al., 1991; Keane et al., 1985; McCranie et al, 1987; Rich & Rich, 1987), the results of this study suggest an inverse relationship between hardiness and burnout demonstrated by significant negative correlations between hardiness and emotional exhaustion and depersonalization and a significant positive correlation between hardiness and personal accomplishment. Unlike the previous studies of hardiness
and burnout in nurses which explored the relationship among
the components of hardiness using a unitary measurement of
burnout, this study was designed to investigate
relationships among and between individual components of
hardiness and individual components of burnout. The Maslach
Burnout Inventory (Maslach & Jackson, 1986), which measures
burnout by scores on scales of emotional exhaustion,
depersonalization, and personal accomplishment, was used to
see which components of burnout might be predicted by
commitment, control, and challenge.

Overall, the relationships thought to exist between
components of hardiness and components of burnout are
supported by the data in this study. Commitment, control,
and challenge combined serve as negative predictors of
emotional exhaustion and depersonalization and positive
predictors of personal accomplishment. The data collected
show a low level of commitment, control, and challenge
accounts for 18% of emotional exhaustion and 16% of
depersonalization, while possessing a sense of commitment,
control, and challenge accounts for 30% of personal
accomplishment.

Of the three components of hardiness, commitment
accounts for the largest portion of the variance in each of
three components of burnout. Further analysis shows
commitment accounts for 45% of the variance in emotional
exhaustion, 44% of the variance in depersonalization, and
30% of the variance in personal accomplishment. Though individually control and challenge are not significant contributors to either emotional exhaustion or depersonalization, a sense of challenge was found to be a significant contributor to the explained variance of personal accomplishment. Thus, in this sample, a low level of commitment seems to be the most significant contributor to both emotional exhaustion and depersonalization, while a sense of commitment and a sense of challenge seem to be the most significant contributors to personal accomplishment.

A review of previous hardiness research noted commitment to be the most consistent of the hardiness components in its relationship to other variables tested. Challenge was found to be the most inconsistent, accounting for very little, if any, of the explained variance in the criteria tested (Orr & Westman, 1990). The findings of the present study are somewhat consistent with the trends noted by Orr and Westman (1990). Like previous studies, the results of the present study show commitment most consistent in explaining the variance of each component of burnout. Unlike the findings of Orr and Westman, control accounted for little, if any, of the explained variance in the components of burnout while challenge was found to explain a portion of the variance of personal accomplishment.

One possible explanation for this unusual finding may be the influence of organizational culture on the sample of
nurses. The sample in this study was obtained from an acute care hospital with a long history of altruism and a strong sense of respect for the dignity and worth of individuals, both as patients and employees. In keeping with the emphasis on respect for the individual, the Nursing Services Division practices shared governance which allows the nursing staff to be involved in setting the standards for nursing practice and delivery of patient care. It may be that in this particular sample of nurses, a sense of challenge is more important than a sense of control in generating feelings of personal accomplishment.

It is also possible that the use of the third generation hardiness scale, or Personal Views Survey, was a factor in challenge emerging as a significant contributor to personal accomplishment. According to Ouellette-Kobasa (1993), the Personal Views Survey contains new items designed specifically to tap the challenge dimension of hardiness.

The challenge subscale is a point of controversy in published hardiness research. Hull and colleagues (1985) argued that because of the unfailing lack of significant contribution, the challenge subscale should be eliminated from the hardiness scale. Their recommendation is based on results obtained from using the 36- and 71-item hardiness scales. Orr and Westman (1990) claimed the suggestion to remove challenge was premature because: (a) challenge is an
essential component of existential personality psychology, and as such, deserves further investigation; (b) challenge does appear as a distinctive factor in both the 20- and 50-item hardiness scales; and, (c) the intercorrelations between commitment, control, and challenge and the correlations between challenge and the total hardiness score in the 50-item hardiness scale are appropriate.

Though not part of the planned design of this study, data from this study helps support Orr and Westman's (1990) reasons for retaining challenge. Challenge did emerge as a significant contributor to the personal accomplishment component of burnout. Furthermore, the intercorrelations among the components of hardiness and their correlations with total hardiness, generated as part of the descriptive analysis for this study (see Table 4), lend support to Orr and Westman's assertion that the challenge scales intercorrelations and correlation to hardiness are appropriate. As shown in Table 4, challenge shows a positive correlation of .789 ($p = .000$) with composite hardiness and positive correlations of .536 and .372 ($p = .000$), respectively, with commitment and control. These intercorrelations are similar to those reported in two other studies using the Personal Views Survey as a measurement of hardiness. Parkes and Rendall (1988) reported a positive correlation of .78 ($p = .01$) between challenge and composite hardiness. Furthermore, these researchers reported
correlations of .49 and .50 ($p = .01$) between challenge and commitment and control, respectively, in their study of postgraduate education students ($N = 87$). Significant positive correlations were cited by Okun et al. (1988) for challenge and composite hardiness ($r = .79$, $p = .001$) and challenge and commitment ($r = .52$, $p = .001$) in their study of thirty-three women with rheumatoid arthritis. No significant correlations were found between challenge and control in the same study. Admittedly, challenge does show lower intercorrelations and correlations with total hardiness than do either commitment or control; however, the correlations, both in this and the other studies cited, do not seem low enough to warrant discarding challenge without further investigation.

Although the present study shows the components of hardiness helps to predict the components of burnout, 82% of emotional exhaustion, 84% of depersonalization, and 70% of personal accomplishment remain unexplained. Several factors not investigated in this study may account for the unexplained portions of emotional exhaustion, depersonalization, and personal accomplishment. Neither the number of years as a nurse, the numbers of years in current position, nor the number of hours worked per week were examined with the major study variables. Had these variables been studied in relationship to the components of burnout, they may have helped explain more of the variance.
in burnout. However, research conducted by Keane and associates (1985) using a sample of nurses \(N = 96\) found none of these factors affected burnout to any great extent.

Age and marital status are two other factors shown by previous research to partially explain burnout. In their study of hospital nurses \(N = 100\), Rich and Rich (1987) found age accounted for 15% to 16% of burnout and that age and hardiness were additive in their explanation of burnout. Marital status was found by Ivancevich and Matteson (1990) to be correlated with burnout from the standpoint that married persons reported less burnout than did either single or divorced people. Although these two variables were not regressed with the major study variables, raw correlations generated between age, educational level, marital status and the components of burnout as part of the descriptive analysis show age and marital status unrelated to emotional exhaustion, depersonalization, and personal accomplishment in this sample (see Table 4).

Other research with hospital nurses \(N = 103\) shows social support to be a significant predictor of burnout (Boyle et al., 1991) as is lack of supervisor support (Constable & Russell, 1986). There may be additional factors in the workplace, such as noise level, workload, and work design, which may also play a role in producing burnout. Further investigation of the unexplained portion of emotional exhaustion, depersonalization, and personal
accomplishment using all the variables discussed above is recommended.

According to several burnout researchers (Golembiewski & Boudreau, 1991; Golembiewski & Munzenrider, 1988; Koeske & Koeske, 1989; Lee & Ashforth, 1990), emotional exhaustion is at the core of burnout. Research with nurses, including this study, consistently shows that hardy nurses report less burnout (Boyle et al., 1991; Keane et al., 1985; McCranie et al., 1987; Rich & Rich, 1987). Data from the present study show hardiness (specifically commitment and challenge) accounts for the greatest portion of variance in personal accomplishment. This finding seems to suggest that hardiness may affect burnout in this sample of nurses by contributing to personal accomplishment. Possibly a sense of commitment and challenge combine to lower burnout in this group of nurses by enhancing their sense of personal accomplishment to the extent that the hardy nurses report less emotional exhaustion and depersonalization. Maybe nurses who possess a realistic sense of dedication and who expect, or even desire, a constantly changing work environment, experience greater feelings of competence and success that in turn makes them less likely to be negative, cynical, and emotionally exhausted. Further investigation into relationships among and between components of hardiness and components of burnout, using a similar but more representative sample of nurses, is suggested to see if
commitment and challenge emerge again as predictors of the components of burnout.

Previous research investigating the relationship between hardiness and coping showed hardiness was negatively related to emotion-focused coping and unrelated to problem-focused coping (Boyle, et al., 1991; Schlosser, 1985). The results of this study are consistent with those of Boyle and colleagues and Schlosser from the standpoint that hardiness is negatively related to coping styles which attempt to minimize the stressful situation without actually resolving it. Unlike findings in those studies, the data from the present study show a significant positive relationship between hardiness and coping styles which attempt to solve or alter the stressful situation. Positive correlations were found to exist between hardiness and (a) active coping ($r = .335, p = .000$), (b) seeking social support for instrumental reasons ($r = .312, p = .001$), and (c) planning ($r = .241, p = .008$). These three coping styles are considered problem-focused coping (Carver et al., 1989). A fourth coping style, positive reinterpretation and growth, also shows a significant positive correlation ($r = .191, p = .028$) with hardiness. Positive reinterpretation and growth, referred to as positive reappraisal by Lazarus and Folkman, (1984), is considered emotion-focused coping (Carver et al., 1989) that not only helps to manage distressful emotions but also may help individuals begin or
resume more active types of problem-focused coping. Findings of the present study suggest hardiness is positively related to both problem-focused and emotion-focused coping.

Relationships among the components of hardiness and coping styles is very similar to respective relationships between composite hardiness and coping styles. Commitment relates (either positively or negatively) to the most coping styles (9 of 15); control and challenge each relate (either positively or negatively) to five coping styles. The three individual hardiness components show similar relationships with almost the same coping styles as composite hardiness. The exceptions are the: (a) addition of a positive correlation between commitment and suppression of competing activities, (b) addition of a positive correlation between challenge and humor, (c) lack of negative correlations between control and denial and focus on and venting of emotions, and (d) lack of negative correlations between control and denial and alcohol/drug use. The consistency among the relationships found between composite hardiness and its respective components with coping styles lends some support to the conceptualization of hardiness as a unitary quality manifested by commitment, control, and challenge.

The finding that hardiness and its components relate positively to both problem-focused and emotion-focused coping style is consistent with hardiness theory's
definition of transformational coping. According to Kobasa et al. (1982) transformational coping involves "an amalgam of cognition, emotion, and action" (p. 238). The results of the present study not only support this conceptualization but enhance the understanding of transformational coping by providing a list of specific coping styles which are positively and negatively related to hardiness and its individual components.

Hardiness and its components show significant positive relationships with positive reinterpretation and growth, active coping, planning, seeking social support for both instrumental and emotional reasons, and suppression of competing activities. The relatively low respective correlations between hardiness, commitment, control and positive reinterpretation and growth ($r = .191, p = .02$; $r = .236, p = .008$; $r = .199, p = .02$) is somewhat surprising. According to Kobasa and Pucetti (1983), hardy persons view stressors as positive opportunities for growth and development. Given this description, it is natural to expect hardy individuals to use a coping style that allows them to construe the stressful situation in positive terms and to look for opportunities to learn from the stressful situation. Therefore, a high correlation between hardiness and the coping style positive reinterpretation and growth was anticipated. However, in this sample, active coping, planning, and seeking social support for instrumental
reasons all show higher correlations with hardiness than did positive reinterpretation and growth. This finding seems to suggest these problem-focused coping styles may be more descriptive of transformational coping than is positive reinterpretation and growth.

Behavioral disengagement (giving up the attempt to reach goals with which the stressor is interfering), focus on and venting of emotions, alcohol/drug use, and denial are types of emotion-focused coping which show significant negative correlations with composite hardiness and the individual components of hardiness. These findings suggest that passive types of coping are not closely related to transformational coping.

In general, the correlations found between hardiness, its components, and coping style lend support to Kobasa's (1979) conceptualization of hardy individuals as active, goal-oriented people who are committed to both themselves and the world around them; who see themselves, not as hopeless victims of life events, but as persons who can do something constructive about the stressful situations they encounter.

The failure of previous research to show the anticipated positive relationship between hardiness and problem-focused coping may have been due to the inability of the coping measurement to discriminate among the various coping styles that comprise the broad categories of problem-
focused and emotion-focused coping. As Carver et al. (1989) noted, specific coping activities within the large category of coping may be unrelated. For example, emotion-focused coping may involve the use of denial, positive reinterpretation and growth or seeking social support for emotional reasons. By using the COPE Inventory (Carver et al., 1989), the present study was able to identify specific coping styles that comprise the broad categories of problem-focused and emotion-focused coping and, consequently, find the positive relationship between hardiness and problem-focused coping one would expect given Kobasa's (1979) description of hardy individuals.

The negative correlation found between hardiness, commitment and denial deserves special comment. Van Treuren and Hull (1987) suggested that hardy individuals report better physical and psychological health because they deny their symptoms. Orr and Westman (1990) proposed that hardy individuals do not deny symptoms but display more courage and persistence when faced with stressful situations. The consistent, albeit low, significant negative correlations between hardiness, commitment and denial seem to support the inference that hardy individuals do not deny the situation nor their internal reactions but instead commit themselves to solving or resolving the stressful situation through coping styles such as positive reinterpretation and growth, planning, seeking social support for instrumental reasons.
and suppression of competing activities. It is premature to say that hardy individuals do not use denial as a coping style, however, the results of this study imply that hardiness is more than a mere denial of symptoms. More detailed study of the relationship between hardiness and denial using similar and different samples is needed before definitive conclusions can be made about the use of denial by hardy individuals.

Although the results of the present study show hardiness and its components are related to a variety of coping styles, hardiness is predominantly related to active, problem-focused types of coping styles. These types of coping strategies are thought to be more effective in situations that can be changed (Lazarus & Folkman, 1984; Pines & Aronson, 1988). As discussed in the review of literature, many of the stressors inherent in the practice of hospital nursing cannot be changed, yet results of the present research imply problem-focused coping strategies are used by this group of nurses to manage occupational stress. These findings seem to support hardiness theory's assumption that hardy individuals believe they can control or influence their environment.

The results of the present study appear to conflict with previous research on the role of individual coping in alleviating occupational stress. Previous research suggests that coping strategies which are effective in the domestic
setting often fail to alleviate stress in the work setting (Pearlin & Schooler, 1978; Shinn et al., 1984) and that rational/cognitive coping was ineffective in reducing the strain of occupational stress (Osipow & Davis, 1988).

Additional research on the role individual coping strategies play in managing occupational stress is recommended. An interesting study would be to see if the coping styles reported by nurses in this sample to deal with occupational stress are the same coping styles these nurses use to deal with non-work related stress. A concurrent study comparing the coping styles hardy and nonhardy nurses use to manage both occupational and domestic stress may be the logical next step to the present study.

There is some speculation that personality dimensions that influence the stress-strain sequence, i.e., hardiness, may do so through the use of a preferred set of coping styles that remains relatively fixed across time and circumstances. Now that an initial set of coping styles has been identified in a sample of hardy nurses it would be interesting to see if the same coping styles would emerge in different sample of hardy nurses.

In addition to investigating the relationship among hardiness and coping style, the present study also looks at the relationship between the components of burnout and coping style. In regards to burnout and coping styles, the results of the present study appear counterintuitive. It
was expected that emotional exhaustion and depersonalization would be positively related to more passive, emotion-focused types of coping styles. However, only two emotion-focused coping styles, focus on and venting of emotions and alcohol/drug use, show a relationship to these two components of burnout. In their study of the relationship between coping and burnout, Boyle et al. (1991) conjectured that the positive relationship found between emotion-focused coping and burnout was the result of the low energy associated with burnout. Boyle and colleagues reasoned that nurses who experience burnout simply do not have the energy to spend on more active types of coping. The significant negative correlation between emotional exhaustion and active coping combined with the significant positive correlation between emotional exhaustion and focus on and venting of emotions found in the present study lends support to Boyle et al.'s speculation. However, it may be that nurses who experience high levels of emotional exhaustion and depersonalization do so because they do not use active coping in their initial response to occupational stress. Perhaps nurses who are more likely to burnout are those with limited coping styles such as focus on and venting of emotions and alcohol/drug use.

The personal accomplishment component of burnout shows significant positive correlations with the more problem-focused coping styles. Personal accomplishment shows
positive correlations with active coping, planning, seeking social support for instrumental reasons, acceptance, suppression of competing activities, and humor. With the exception of acceptance, these are the same coping styles positively related to hardiness or its components. This finding seems to add even more support to the speculation that hardiness affects burnout in this sample of nurses through coping styles which may enhance personal accomplishment.

The relationships among and between hardiness, coping style, and burnout are complex and must be investigated further before any conclusions can be made about the role of coping style in response to occupational stress. The relationships between hardiness and coping style uncovered in this study are a beginning toward a better understanding of how hardiness and coping style may work to reduce stress among hospital nurses.

Like most survey research, the data collected for this study are based on self-report measures collected at a single point in time and thus are subject to all the problems associated with self-report measures such as respondent veracity, differences between reported behavior and true behavior, memory error, and response effects due to questionnaire wording. In addition, the correlational nature of the study precludes making causal inferences. Furthermore, the method of sampling used prevents
generalizing the findings of this study to another group of nurses.

Despite the limitations, the results of this study have significance. Given the current critical shortage of nurses and the turmoil surrounding healthcare today and in the future, the need to keep nurses in the profession is paramount. The findings of this study have both practical and psychometric implications for the retention and preparation of hospital nurses. The present study shows a low level of commitment, control, and challenge (more specifically commitment) is a significant contributor to emotional exhaustion and depersonalization in some hospital nurses. Conversely, possessing a high sense of commitment, control, and challenge (more specifically commitment and challenge) is a significant contributor to feelings of personal accomplishment. The relationships established between hardiness and burnout in this study imply that evaluating for a sense of commitment and challenge (as defined by hardiness theory) may be valuable when interviewing prospective hospital nurses. A strong sense of commitment to self and others, coupled with a belief that change rather than stability is normal in life, may be important factors that help nurses find meaning and purpose in their work and thus keep nurses within their profession. As Pines and Aronson (1988), two respected researchers in burnout, noted, people will not burnout, even if the job is
stressful and the pay inadequate, if their work is meaningful to them.

Second, nurses who are high in hardiness may be valuable human resources to hospitals by serving as role models for dealing with occupational stress appropriately. Pairing newly employed or graduate nurses with nursing personnel who demonstrate a hardy approach to their work may facilitate the transition to a new work environment and consequently enhance both nurse retention and delivery of nursing care.

Both of the suggestions above imply use of some method to identify hardy nurses. Though it is premature to suggest the third generation hardiness scale be used as a selection tool, this measure of hardiness shows more promise in that direction than the previous hardiness measures. More research using this version of the hardiness instrument is highly recommended for future studies of nurses and hardiness.

The inverse relationship between hardiness and burnout is well substantiated by this and other studies. The new data from this study showing a similarity between coping styles demonstrated to have significant positive relationships with both hardiness and personal accomplishment open the door for a new direction in training and development for hospital nursing staff. Perhaps now is the time for hospitals to provide resources, such as
counseling and hardiness training, to help their nurses expand their coping repertoire to include those coping styles found to be positively related to hardiness and personal accomplishment.
PARTICIPANT INSTRUCTIONS

Dear Colleague,

For my doctoral dissertation at the University of North Texas I am doing a study that examines coping behaviors related to work stress and how nurses in particular deal with this type of stress. Your participation in this study will add considerably to the existing body of knowledge regarding the behaviors nurses use to cope with occupational stress.

Your participation in this study is totally voluntary. Participation in this study is not required as a stipulation of continued employment. You may withdraw your participation in the study at any time. You are asked to sign a consent form indicating your willingness to participate in this study. Though answering the questionnaires may be thought provoking, there is no risk to you psychologically, socially, or physically.

Participation in this study consists of completing four short questionnaires and a demographic data sheet. It will take approximately 15 minutes to complete all the required forms. You may use either pen or pencil to complete the forms. PLEASE READ THE DIRECTIONS FOR EACH QUESTIONNAIRE CAREFULLY. EACH ONE USES A DIFFERENT SCALE OR METHOD FOR SUPPLYING RESPONSES. After you sign the consent form please:

1. Seal the consent form and your entry for the free gasoline drawing in the small envelope.
2. Complete the four questionnaires and the demographic data sheet.
3. Place the small sealed envelope, the four questionnaires and the demographic data sheet in the large envelope provided.
4. Return the large sealed envelope to your Head Nurse within one week after you receive it.

Do NOT write your name on the questionnaires or the return envelope. This is neither required nor needed since only summary data will be used in the analysis. An information session will be scheduled following completion of the study to present a summary of the findings. If you are unable to attend the information session, a written summary of the study will be available from your Director.

Thank you for your participation. If you have any questions connected to this study, please contact Phyllann Fusco in Organization Development, Ext. 2766 or 250-3753 or Denny Engels, Ph.D., Professor of Counselor Education, University of North Texas, (817)-565-2918.

Sincerely,

Phyllann S. Fusco, B.S.R.N., M.A.

This study is approved by the University of North Texas Committee for the Protection of Human Subjects (817-565-2918) and the St. Paul Medical Center Nursing Research Committee.
APPENDIX B

INFORMED CONSENT
PARTICIPANT INFORMED CONSENT

Please read carefully, sign and date, and secure in the small envelope provided. Put the sealed envelope along with your completed questionnaires in the large envelope. Feel free to make a copy of this form for yourself.

I agree to participate in a study conducted by Phylann S. Fusco, B.S.R.N., M.A., a doctoral candidate at the University of North Texas, investigating the behaviors used by hospital nurses in coping with occupational stress.

I understand I will complete a series of brief questionnaires and a demographic data sheet. I understand any personal information revealed will be kept confidential and will be protected from inadvertent or improper use.

In addition, I understand the information gathered through this study will be included with that of others in the reporting of the study, and that my identity will be kept completely anonymous.

I understand my participation is voluntary and not a stipulation for continued employment. I am free to withdraw my participation at any time.

I have read the above and agree to participate in this study.

Signature: ____________________________________________________________

Date: ________________________________________________________________
APPENDIX C

DEMOGRAPHIC DATA SHEET
DEMOGRAPHIC DATA SHEET

The following information is necessary for research purposes. It will be used to compare the findings from this study to other studies completed on occupational stress. The information provided on this sheet will be summarized with that of other respondents therefore your individual responses will not be identifiable. Please read the following questions carefully and answer them honestly.

Please check or fill in the items below.

Your sex: _____ (1) female  _____ (2) male
Your age: _____ years
Your occupation: _____ (1) RN  _____ (2) LVN

Level of education completed:
_____ (1) Diploma  _____ (4) M.A./M.S.
_____ (2) A.A./A.S.  _____ (5) Ph. D.
_____ (3) B.A./B.S.  _____ (6) Ed. D.
(7) Other (please specify _____________________________)

The primary area in which you work: (Check only one answer.)
_____ (1) Education/Training  _____ (5) Mental Health
_____ (2) Intensive Care  _____ (6) Oncology
_____ (3) Maternal/Child  _____ (7) Orthopedics
_____ (4) Medical/Surgical  _____ (8) Surgical Services
(9) Other (please specify _____________________________)

The primary position you hold: (Check only one answer.)
_____ (1) staff member  _____ (3) administrator
_____ (2) supervisor/manager  _____ (4) educator
(5) Other (please specify _____________________________)

How many hours per week do you work at the job indicated above?
_____ hours per week
How long have you been at your present job? _____ years

How long have you been employed in your occupation? _____ years

**Marital status:**

- _____ (1) single
- _____ (2) married
- _____ (3) divorced
- _____ (4) separated
- _____ (5) widowed

If you have children, how many of them are now living with you?

- _____ children live with me

**Are you (check only one group):**

- _____ (1) Asian, Asian American
- _____ (2) Black, African American
- _____ (3) Latino, Hispanic, Mexican American
- _____ (4) Native American
- _____ (5) White, Caucasian
- _____ (6) Other (please specify)

**What is your religion? (Optional)**

- _____ (1) Roman Catholic
- _____ (2) Protestant (specify denomination)
- _____ (3) Jewish
- _____ (4) Islamic
- _____ (5) Other (please specify)
- _____ (6) None, no religion

How religious do you consider yourself to be? (Circle the appropriate number.)

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<td>very religious</td>
<td>not at all religious</td>
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APPENDIX D

COMPLETION VOUCHER
Every nurse who completes all the questionnaires is eligible to win FREE gasoline. Five $20.00 CITGO Gasoline Gift Certificates will be awarded by a random drawing held the week following the questionnaire packet return deadline date. To be eligible for the drawing place this completed entry form in the small envelope provided for your informed consent and return it with the completed questionnaires and the demographic data sheet in the large envelope provided. You will be notified by phone if you are a winner. Thanks for your participation and Good Luck in the drawing!

I certify that I have completed all the enclosed questionnaires. Please enter my name in the qualified respondent drawing for free CITGO gasoline.

Name: ________________________________

Work Unit: ___________________________ Ext: _______ Home Phone: _______

PLEASE PRINT LEGIBLY.

DO NOT PUT ANY IDENTIFYING MARKS ON THE RETURN ENVELOPE
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