THE USE OF HUMOR BY CRITICAL CARE NURSES IN COPING WITH WORK-RELATED STRESS

by

Pamela K. Huso, R.N., B.S.N.

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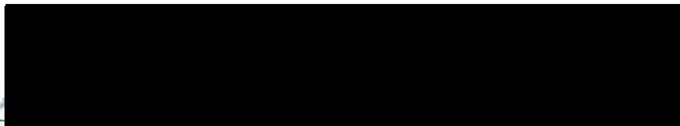

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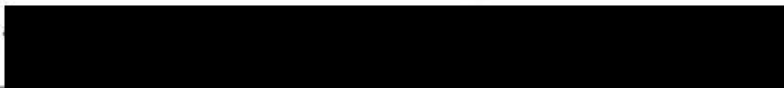

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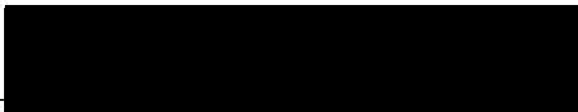
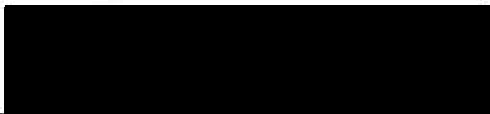


Barbara C. Gaines, Ed.D., Associate Professor, Reader



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

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CHAPTER I

INTRODUCTION

Stress in the critical care environment has come under close scrutiny in recent years (Bailey, Steffen & Grout, 1980; Bilodeau, 1973; Cronin-Stubbs & Velsor-Freidrich, 1979; Gentry, Foster & Froehling,1972; Gribbins & Marshall, 1982; Hay & Oken, 1972; Huckabay & Jagla, 1979; Jacobson, 1978, 1982; Oskins, 1979; Stehle, 1983; Vreeland & Ellis, 1969). Even though the sources of work-related stress have been identified, to some extent, in the previously mentioned studies, an effective way of dealing with this problem has yet to be introduced. Nationwide, the severe shortage of nurses in the critical care areas has affected the quality of patient care and in some cases has caused intensive care units to be closed. "Burnout" has become the catchall word to describe the reasons for the shortage of nurses in these units secondary to a variety of factors that include: job dissatisfaction, overwhelming work-related stress, and poor monetary rewards. This high attrition rate of intensive care nurses attests to the need for additional studies to evaluate their responses to work–related stress and subsequently, to develop strategies that would enable them to deal more effectively with stress in the work situation and thereby maintain nurses in the workplace.

The effective use of humor in the health care setting, involving a variety of nurse-patient and nurse-colleague situations has been observed to be both well received and apparently beneficial in relieving anxiety, work-related stress, and offering new perspectives on stressful situations (Coser, 1962; Coombs & Goldman, 1973; Leiber, 1982; Robinson 1977, 1983). Unfortunately, humor is a concept about which there is little theoretical or practical agreement. Traditionally, laughter and levity may have

been considered unprofessional behavior, but the recent development of such national organizations as Nurses for Laughter give new credence to the professional recognition of humor and laughter as a relevant part of nursing practice.

A study by Leiber (1982), describing nurses' use of humor in a university hospital, played a key part in generating interest in the study of humor by the present investigator. Leiber's study recommended that humor be used more to prevent or reduce the "burnout" phenomenon in nursing. This was based on nurses' descriptions of applications of humor to cope with job-related stresss. Nurses described humor as effective when they were overworked, frustrated, angry or bored. Donnelly (1979), Fox (1959), and Robinson (1977, 1983) all reported similar findings and advocated humor use by nurses, in general, to cope with profesional stresses. Leiber (1982) found that humor was an effective and useful nursing intervention that was appreciated by both patients and staff. These findings prompted the present study to investigate whether or not humor could be used as an effective coping strategy by nurses in the critical care areas for reducing certain aspects of work-related stress.

This present study examines the sources of stress in the critical care environment and nurses' reactions to this stress i.e., as a challenging experience for them or a threat to their well-being. Lazarus' definitions of appraisal and coping (Lazarus, 1982; Lazarus & Folkman, 1984; Lazarus & Launier, 1978) are utilized as the theoretical basis for the examination of humor as a specific method of coping with this work-related stress. This study further examines the use of humor in the critical care setting (when it is used; with whom; and the types of humor used), and presumably provides insight into the planned use of humor, verses "spontaneous laughter" and its implications for

both nursing practice and nursing education. Following is a review of the literature relating to the concepts just described.

Review of the Literature

This review of the literature is organized according to the major variables of the study. First stress and the critical care environment will be discussed. This is followed by a review of studies related to coping and work-related stress. Finally, the topic of humor in the health care setting and its use as a coping strategy by nurses in critical care units is presented.

Stress and the Critical Care Environment

In this section the concept of stress is defined. This is followed by a discussion of the critical care environment and its relationship to stress.

The term "stress" is extensively discussed in health-related literature. It is widely accepted as a practice-relevant phenomenon, not only in nursing, but in other professions as well. Stress is called the "20th Century Disease", and many health problems such as coronary disease, hypertension, cancer, and autoimmune responses are believed to be triggered by stress. Job performance of individuals may also be negatively influenced by undue stress. Burnout, low morale, reduced energy levels, and absenteeism may all be symptoms of increased work-related stress. New and expanded roles in nursing (especially in the critical care setting), increased demands for accountablity, and new laws and regulations in the practice of nursing, have made today's nurse particularly vulnerable to stress.

Lazarus and Folkman (1984) present a history of the concept of stress from the early 14th Century when it was a term used to mean hardship or affliction, up to its

present use as a concept in scientific investigation. The majority of the literature defines stress as either a stimulus or a response. In the stimulus model, stress is the independent variable. It is conceptualized as causing a response. Historically, the stimulus model had its roots in the works of Holmes and Masuda (1974) and Holmes and Rahe (1967). Their research focused on the development of the tool known as the Social Readjustment Rating Scale (SRRS) or Schedule of Recent Experiences (SRE). These instruments were developed to measure the effects of significant life changes or events on health. According to Holmes and Rahe (1967), stress is a phenomenon that is measurable, and by using the SRRS or the SRE, a stress score can be obtained by the summing of weighted responses or by counting the number of relevant events that had occurred. These scales have appeal because they appear to be precise and objective psychometric instruments. However, as noted by Lazarus, the stimulus approach also assumes that certain situations are normatively stressful so they do not allow for individual differences in the evaluation of events (Lazarus & Folkman, 1984). Therefore, the stimulus model would lack discrimination between nurses in the critical care environment.

Stress as a response represents the disruptive effects on an individual caused by a noxious stimulus or stressor. It is, therefore, the dependent variable rather than the independent variable, as in the stimulus model. "Response definitions which have been prevalent in biology and medicine refer to a *state of stress*; the person is spoken of as reacting with stress, being under stress, and so on" (Lazarus & Folkman, 1984, p. 21).

A response theorist, whose model is used a great deal in health-related literature, is Selye. He defined stress as the non-specific response of the body to any demand. He

called this reaction the General Adaptation Syndrome (Selye, 1956; 1976). Stress was treated essentially as a disturbance in homeostasis produced by environmental change. Like the stimulus model, the response model does not allow for individual differences in response patterns and would not allow for nurse characteristics to be taken into consideration.

Lazarus and Folkman state that all stimulus-response approaches "are circular and beg the crucial questions of what it is about the stimulus that produces a particular stress response, and what it is about the response that indicates a particular stressor. It is the observed stimulus-response relationship, not the stimulus *or* response, that defines stress" (1984, p. 15). Other problems in the stimulus-response concept lie in the definition of a stress response, since a stimulus is defined as stressful only in terms of a stress response and there are no *rules* to specify the conditions under which some stimuli are stressors.

Lazarus suggests that stress be treated as an "...organizing concept for understanding a wide range of phenomena of great importance in human and animal adaptation. Stress, then, is not a variable but a rubric consisting of many variables and processes" (Lazarus & Folkman, 1984, p. 12). Lazarus considered the stimulus and response definitions of stress to have limited utility and proposed his own definition of stress which emphasized the relationship between the person and the environment and yet allowed individual characteristics to be considered as well as recognizing the significance of environmental events. "Psychological stress, therefore, is a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus &

Folkman, 1984, p. 21). For purposes of this study, Lazarus' definition of stress and his transactional model that views the person and the environment in a mutually reciprocal and bidirectional relationship was utilized.

Stress is a concept that encompasses a set of cognitive, affective, and behavioral variables that arise out of person-environment transactions (Lazarus, 1966). In the transactional approach cognitive apppraisal mediates stress experiences. Unlike the stimulus and response models, the transactional model allows for individual differences.

Nurses in the critical care units experience stressful events related directly to the individual patient needs and indirectly to the pressures within the highly technical environment. Internal and external environments within which stimuli may arise are: (1) the intensive care unit (ICU) itself, (2) the nurse's psychological self, (3) the patient and his care, and (4) other hospital personnel. Research in nursing practice that defines work-related stress and then systematically identifies the sources of stress perceived by nurses is limited. Early articles were simply descriptive studies that dealt with examination of components of critical care stress rather than its definition. Data were gathered through personal observation and reported as general accounts of the ICU milieu, social relationships, and psychological hazards (Kornfeld, 1971; Strauss, 1968). The purposes of these early studies seemed to be to emphasize the presence of stress in critical care nursing and to identify the antecedents to stress.

Vreeland and Ellis (1969) were the first to deal solely with stresses impinging on ICU nurses. Observational data showed that physical and psychological conditions of patients were deemed to be the most stressful aspects of work. Tensions were categorized into direct stresses (those involving patient care) and indirect stresses (concerning environmental phenomena).

Gentry, Foster, and Froehling (1972) concluded that psychological and emotional stress were primarily a product of the professional situation in which the nurse was presently operating and not her own personality. In contrast to this, psychiatrists Hay and Oken (1972) addressed psychological or internal stressors of ICU nurses. Although their observations were made in a single ICU, the frequent references to their findings in the literature gives some degree of credibility and generalizability to their work. Hay and Oken (1972) identified ICU staff as experiencing feelings of helplessness. They found that nurses were functioning under anxiety or stress which heightened the potential for mistakes, clouded problem-solving, and lessened their effectiveness.

Other investigators have offered strategies for categorizing critical care stresses. Bilodeau (1973), who based her report primarily on her own experiences and observations, identified sources of frustration and satisfaction and grouped them into the following categories: the patient and his care; personnel; environment; and families and others. She presented these as stresses caused by external factors. Hay and Oken (1972) also categorized internal and external stressors. They asked nurses to rate the frequency, severity of stress and also used forced-choice comparisons of stresses that yielded 12 groupings of items. Some of these areas of stress were: intimacy with the frightening, repulsive, and forbidden; repetitive routine; formidable work load; visitors; physicians; poor administrative support; heavy lifting; and nurse-nurse conflicts.

Huckabay and Jagla (1975) proposed to identify, verify, measure, and rank order factors in the ICU that the nurse herself perceived as stressful. The subjects were 46 female, full-time, ICU staff nurses from six different hospitals. The specific factors perceived as highly stressful were the death of a patient, the workload, and the amount

of physical work. The four categories of stressful factors in the ICU were: patient care, interpersonal communication, environmental (equipment, noise, etc.), and knowledge base. Oskins (1979) investigated the situation-stressors identified by ICU nurses. By use of a questionnaire and the Rahe Life Change Event Scale, the sample of nurses identified six situational stressors. These stressors were: patient and patient care, ICU itself, patient's family, administration, and ICU personnel and other ICU nurses. Jacobson (1983) reported a classification scheme of stress and coping responses in the neonatal intensive care unit (NICU). Data were collected from 87 staff nurses from seven different NICUs in three states. A Q-sort technique and ratings of severity and frequency of stresses were employed. The five categories of most stressful situations included: nurse-physician problems; understaffing; heavy workload; sudden death of a patient; personal insecurity; and the shock of sights and smells. Jacobson concluded that a large portion of NICU stresses were intraindividual rather than extraindividual.

In the previous studies (Bilodeau, 1973; Huckabay & Jagla, 1979; Jacobson, 1978; Oskins, 1979) stress is regarded as a stimulus and characterized as deriving from a variety of sources: work itself or its environment and equipment; patients and families; physicians and other nurses. This requires the researcher to designate a situation as "stressful", even though it may also be source of satisfaction and challenge to another individual.

Bailey, Steffen and Grout (1980) conducted a stress audit to obtain data on the stressors of some 1800 ICU nurses in three ICU sample populations (regional, national, and local). The framework for this study was essentially derived from the work of

Lazarus. The purpose was to identify "stressors" and "satisfiers" of ICU nurses as well as to gather pertinent demographic and personal data. The categories of patient care and interpersonal relationships were perceived by the ICU nurses from all three groups as those that caused them the most stress. It is interesting to note, however, that these two categories were also listed as the greatest sources of satisfaction. Seven major categories which produced the greatest sources of stress were: management of the unit; interpersonal relationships; patient care; knowledge and skills; physical work environment; life events; and administrative rewards.

Bailey, et al. (1980) emphasized that stress could have positive or negative effects on nurses and that these effects are largely determined by the perception and appraisal of the individual nurse. This study showed that the greatest sources of stress in the ICU could also be the greatest sources of satisfaction. Bailey, et al. used Lazarus' model as the theoretical framework for their study and it was the only study that emphsized that both the positive and the negative effects of stress required further investigation to be understood. Nurses' responses to stress have also been examined, primarily with respect to the effects that stress has on physical and mental health and performance. Gentry and Foster (1972) concluded that the nurse in ICU has a tendency to become depressed, hostile and anxious as a result of stress, and as the level of stress increased, the nurses reported more dissatisfaction with various aspects of the work environment and manifested more intra-staff tension. High levels of stress in nurses may lead to interstaff discord, somatic complaints, and high turnover rates which may be a reflection of the nurses' attempts to escape a stressful environment.

Other authors have also identified critical care nurses' responses to stress. The main responses cited were: overeating, anger, fatigue, sleeplessness, alcohol or drug

use, depression, and feelings of decreased self-worth (Hay & Oken, 1972; Lewis & Robinson, 1987; Oskins, 1979). The negative responses to work-related stress are the focus of most of the stress studies, but the postive responses such as feeling challenged, motivated and resourceful have received minimal attention.

In summary, the literature review substantiated that the critical care environment is highly stressful. Much effort has been devoted to categorizing the sources of stress, however, there was little consensus among the studies in regard to names attached to their categories. Category systems were inductively identified but, for the most part, the authors did not attempt to classify stressors according to applicable theories.

Coping with Work-Related Stress

In this section the concept of coping is defined. This is followed by a discussion of coping relative to the nursing profession.

Recognition of the high level of situational stress in the critical care environment has also led to an examination of the coping strategies of the nurses working in these units. A person's ability to function properly and adapt to a given situation depends upon the use of effective coping strategies. The concept of coping has undergone a great deal of examination by theorists. As was true with the definition of stress, there are a great number of differing viewpoints regarding the definition of this term. The concept of coping emerged from two very different theories. One is derived from animal experimentation, the other from psychoanalytic ego psychology. "The animal model focused on the concept of drive (or arousal or activation), and coping is usually defined as acts that control aversive conditions and thereby lower drive or activation" (Lazarus & Folkman, 1984, p. 139). This approach is heavily influenced by Darwinian theory that

purports that an animal is dependent on its nervous system to make survival-related selections. Research utilizing the animal model centers largely on avoidance and escape behavior. It is simplistic and "lacking in in the cognitive-emotional richness and complexity that is an integral part of human functioning" (Lazarus & Folkman, 1984, p. 118).

In the psychoanalytic ego psychology model, coping is defined as " realistic and flexible thoughts and acts that solve problems and thereby reduce stress" (Lazarus & Folkman, 1984, p. 118). In this model, traits or styles of coping are emphasized. Once established, they presumably operate as coping mechanisms over the course of a lifetime. Measurement purposes to which these models have been applied have generally been limited to classifying people in order to make predictions about how they will cope with stressful encounters. In this psychoanalytic model, coping styles are broader, more pervasive ways of ascribing or relating to particular types of people such as Type A personalities (Glass, 1977). Traits are considered to be properties of a person that dispose him/her to react certain ways across many diverse situations (Moos, 1974). Measurement approaches based on the ego psychology model have tended to assess coping traits and styles rather than processes.

In both the animal and psychoanalytic models, coping is equated with adaptational success. It was Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964) who pointed out the importance of defining coping independently of outcome and demonstrated that a study of coping behavior should include failures as well as successes. Lazarus and Folkman (1984) concur, stating that definitions of coping must include "efforts to manage stressful demands, regardless of outcome. This means that no one strategy is considered

inherently better than any other" (p. 134). The efficacy of a strategy is determined only by its effects in a given encounter and its long term effects. For example denial may be adaptive at certain stages and maladaptive or not effective in other situations. "Finally coping should not be equated with mastery over the environment; many sources of stress cannot be mastered, and effective coping under these conditions is that which allows the person to tolerate, minimize, accept, or ignore what cannot be mastered" (Lazarus & Folkman, 1984, p. 140).

Lazarus and Folkman (1984) define coping as "constantly changing cognitive and behavioral efforts to manage specific external and/ or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). It is a process-oriented definition (verses trait-oriented) that distinguishes between coping efforts and automatic adaptive responses. In the theoretical framework developed by Lazarus and his co-workers (e.g., Lazarus, 1966; Lazarus & Launier, 1978; Lazarus & Folkman, 1984) coping involves cognitive and behavioral efforts to master, minimize, tolerate or reduce internal and environmental demands and the conflicts among them in stressful transactions between the person and the environment. Such coping efforts serve " two overriding functions: managing or altering the problem with the environment causing distress (problem-focused coping), and regulating the emotional response to the problem (emotion-focused coping)" (Lazarus & Folkman, 1984, p. 179). This definition of coping as a process-oriented method was utilized in the present study.

In summary, the critical difference between the trait-oriented and the process-oriented approaches is the environmental context in which coping occurs. In the

trait-oriented model, coping is primarily a property of the person, and variations in the stressful situation are of little importance. In the process-oriented model, coping is assessed as a response to the psychological and environmental demands of specific stressful encounters.

The process-oriented definition of coping has the functions of regulating stressful emotions (emotion-focused coping) and altering the troubled person-environment relationship (problem-focused coping). In order to elicit information about the strategies a person uses to deal with a specific encounter, Lazarus and Folkman (1984) developed a 68-item Ways of Coping instrument. These 68 items describe a broad range of cognitive and behavioral strategies people use to manage internal and/or external demands in specific stressful encounters (Lazarus & Folkman, 1984). The results showed that the subjects used both problem-focused and emotion-focused coping strategies, and that when the consequences of coping are considered, multiple outcomes, not a single adaptational outcome, must be considered.

The nursing literature indicates that the concept of coping, relative to the profession, has been developed primarily by observing and reporting strategies that were effective in reducing or alleviating work-related stress. Hay and Oken (1972) reported that distancing and avoidance seemed to decrease the distress of nurses in an ICU, which in turn allowed them to pursue their patient care tasks more effectively. Oskins (1979) used Lazarus' theoretical model as a basis for defining coping, and administered a questionnaire to 79 critical care nurses in five acute care hospitals. Twelve potentially stressful narratives were developed along with a list of 20 coping strategies. Four coping methods were identified by the sample as being useful more than

50% of the time and represented the following behaviors: talking it out with others; taking definitive action based on present understanding; drawing on past experiences; or becoming anxious. The first three methods were based on the nurse's perception of the stressor. After the nurses' anxiety increased, other palliative modes, such as becoming angry, avoidance, rationalization, and seeing the humor, were used in an attempt to minimize stress.

Gribbens and Marshall (1982) divided the coping techniques of 47 NICU nurses into personal-reactive strategies (talking to people outside the unit, talking with fellow nurses), management strategies (attending psychotherapy, participating in meetings with physicians), and personal-proactive strategies (priorities, humor, confrontation). Jacobson (1983) examined the stresses and the coping strategies reported by NICU nurses. Sixty nurses from eight hospitals participated. A coping scale using short-story problem situations as stimuli was constructed using Lazarus' model for the framework. Those coping strategies that involved cognitive processing were: seeking more information; reworking the situation in your mind; and broadening your range of influence and concern. Strategies that involved using personal skills were: talking directly to personnel involved; keeping perspective on the situation; reducing tension; and lightening or brightening the environment. The final category was escape and it involved reducing contact with the situation.

A 1987 study of 30 critical care nurses in a midwestern veterans' hospital by Lewis and Robinson investigated the correlation between work-related stressors of critical care nurses, their response to stress, and measures used to cope. The main stress-producing stimuli were: (1) competency level of Residents, (2) administrative

support or lack thereof, (3) lack of communication and (4) lack of job rewards. The common responses to these four stressors were fatigue, frustration, and quietness. A variety of methods were employed in an attempt to reduce this stress. Discussing problems with co-workers, problem solving, and escape from the environment by going home and reading and watching TV were the major coping strategies.

The use of humor as a coping mechanism seems to hold some appeal for nurses. Its present use in the critical care settings, however, seems to be primarily unplanned and situational. Humor was mentioned as a palliative coping behavior by Oskins (1979) and as a personal skill by Jacobson (1983). It was an early study by Coombs and Goldman (1973) that first emphasized the importance of humor use by ICU personnel. The investigators, after a three month participant-observation period in an ICU, considered humor a psychosocial technique that was necessary to maintain emotional detachment while caring for critically ill and dying patients.

In summary, the literature reveals that there is little coherence in theory and research related to coping strategies of critical care nurses. Lazarus' model has been used by some researchers (Jacobson, 1983; Oskins, 1979); however, the Ways of Coping Instrument was not utilized and therefore, there are inconsistencies in reporting the data. Talking it over with other co-workers seems to be a strategy that is valued in all the studies that were mentioned. However, there was little elaboration relative to the content or the setting in which the communication occurred. This makes it difficult to validate the utility of the strategy in reducing work-related stress. This same problem was also evident with the other coping strategies that were listed. It would seem, therefore, that there is a need for further investigation of strategies that are

effective in reducing work-related stress. The use of humor in the health care setting and its use as a possible coping strategy will be discussed in the following section.

Humor in the Health Care Setting

Humor can be therapeutic for not only the nurse but the patient; however, it is easy for "nervous or inappropriate laughter" to be misinterpreted. It is the purpose of this section of the literature review to examine how humor is used in the health care setting and its potential as a coping strategy in reducing work-related stress. Nurses who work in the critical care setting have to some extent recognized humor as a coping strategy that can function to reduce work-related stress and subsequently help them to function more effectively and better serve the interests of those patients whose lives, in many cases, literally rest in their hands. There has been some support for the "emotionally therapeutic" value of humor as an adaptive coping behavior, as a catharisis for the relief of tension, as a defense against depression, as a sign of emotional maturity, and as a survival mechanism. (Coombs & Goldman, 1973; Coser, 1962; Donnelly, 1981; Fry, 1982; McGhee, 1979; Moody, 1978; Robinson, 1977, 1983) Lazarus (1982) supports the theory that postively-toned emotions can have a constructive effect at the physiological as well as the social and psychological levels, possibly helping to prevent or ameliorate stress-linked problems. Laughter is usually associated with a state of well-being, even with good health. Yet science has a hard time demonstrating what everybody "knows" to be true, and there is something inherently funny about researching humor and laughter.

Of all the human expressive behaviors, laughter has been one of the most fascinating, from the times of Plato to the present. Knowledge of laughter, other than of

its clinical manifestations, is limited. Over the last 20 years, Fry has been one of the leading investigators involved in delineating the physiologic dimensions of laughter--what he calls the effects of humor. Fry (1979) concluded that laughter was beneficial, "resulting in an increase of the circulation of important blood-transported elements, responding both to the metabolic needs of body tissues and to the immune protection needs of the organism" (p.2). Fry (1982) also expanded on the positive role of humor in mental and emotional healing. It should be noted that the separation of laughter from humor often becomes a matter of definition and there are as many of these as there are different theorists. This study did not attempt to examine or identify the individual properties of humor.

Coser (1962) suggests that humor is an "invitation to those who are present to join in laughter" (p. 81). She states that laughter is an equalizer "because to laugh with others presupposes some degree of common definition of the situation" (p. 81). In Coser's study verbatim records were used to document all conversations in which humor and laughter occurred at the staff meetings of a mental hospital for a period of three months. She also limited the study to intentional or planned humorous episodes in which laughter was the intended response. She did not include involuntary, laughter-producing situations. Coser found that humor served to reduce the social distancing between staff members (physicians and nurses, for example) and permittted them to share experiences without focusing on the seriousness of concerns. In this setting Coser found that humor relaxed the rigidity of the social structure without upsetting it; it converted hositility and controlled it, while at the same time permitted its expression. Humor was used as a device both for giving and asking for support.

Black (1984) defines laughter as a reflex, a psychosomatic event, a voluntary reaction to a conventional situation or an expression of psychopathology. "Laughter, as a behavior, has many causes, including humor, incongruity, relief, and a sense of well-being" (p. 2995). Black further states that humor appreciation (indicated by laughter), depends not only on cognition but innumerable other variables (age, sex, education, language, semantics, and culture). In other words what seems humorous or funny to one individual will not appear so to someone who does not share a similar frame of experience. Finally, Black points out that laughter does have great therapeutic value and that the more a person laughs voluntarily (as opposed to involuntarily) the better he or she feels. Donnelly (1981) agrees. She states that laughter sets us free, "if only for a moment--free from the limitations and fears which convention, logic, conformity, and morals impose upon us" (p. 42). Laughter is a safety valve that allows for psychological well-being.

Robinson (1977) defines humor as "any communication which is perceived by any of the interacting parties as humorous and leads to laughing, smiling or a feeling of amusement" (p. 103). Robinson is one of the leaders in the movement to legitimize the use of humor as a therapeutic intervention by nurses, not only with patients but with other staff members and among themselves. For purposes of this study Robinson's definition of humor was used.

Several writers have advocated the use of humor as a means of coping with the physician's feelings of helplessness and powerlessness in dealing with illness and dying, and as a means of reducing the daily stress of the work situation (Fox 1959; Moody, 1978). There has also been support for the emotionally therapeutic value of humor as a

coping and healing mechanism for the patient dealing with the stress of illness (Coser, 1962; Cousins, 1979; Robinson, 1977). It should follow then that nurses also have a need for humor in the workplace.

Humor has also been examined by a number of other writers as a coping mechanism in a more general sense. Freud (1905) advanced the "tension relief" theory of humor and upheld the idea that humor allowed for the release of sexual tension and aggressive and hostile impulses. He also speculated that humor provided a release from the logical and rational obligations in life. McGhee (1979) also found humor and laughter as a means of release or liberation from mortality. Humor is a means of confronting daily conflicts or problems that must be dealt with. "By occasionally stepping back from the seriousness of the situation and approaching it with a sense of humor...we are better able to deal with the source of the problem (or)...in a better position to cope with conflict after humor than before it" (McGhee, 1979, p. 21).

Robinson (1977; 1983) indicated that humor is a means of coping with internal stress. She summarized the functions of humor as: a coping mechanism to relieve anxiety, stress and tension; an outlet for hostility and anger; an escape from reality; and a means of lightening the burden associated with crisis, tragedy, chronic illness, disabilities and death.

Leiber (1982) reported that humor was used most frequently by nurses to cope with stress and anxiety which were produced by interactions with patients and by interactions with the critical care environment itself. The study by Leiber was conducted in a university hospital and involved nurses from two nursing care units (an intensive care unit, and an oncology-post open heart surgical unit). The purpose of the

study was to describe the use of humor by nurses in the acute care setting, and its perceived effect on patients. Leiber studied the following aspects of humor: the frequency of humor use; circumstances under which humor was used; and the associated outcomes, attitudes and perceptions of patients regarding the use of humor by nurses. Leiber (1982) found that, in general, the use of humor by nurses was positively received by patients. In fact, patients overwhelmingly endorsed the use of humor by nurses 92% of the time. Humor was also found to be effective in reducing stress, both from the perspective of the patient and the nurse. The frequency of humor use did not differ significantly between the two units. Perceptions of the amount of humor on the units did differ significantly. "Nurses found humor to be effective when they were overworked, frustrated with the job, angry with the hospital system or hospital routine, angry at physicians, or bored" (Leiber, 1982, p. 57). Donnelly (1979), Fox (1959), and Robinson (1977) all made similar observations and found that the use of humor by nurses, in general, was an effective means of coping with work-related stress.

General Summary

There have been a large number of studies that have focused on the sources of stress for the critical care nurse, the effects of stress on staff and the coping mechanisms employed. The major stressors consistently identified across all studies were heavy workload related to inadequate staffing, communication conflicts, lack of administrative support, the technical nature of the ICU and dealing with death and dying. The research on ICU nursing stress is complicated by the fact that various researchers have used different definitions of stress and that may result in different views of what constitutes a stressor.

The role of coping strategies in reducing stress has also been considered. The concept of coping relative to the nursing profession has been primarily developed by observing or reporting strategies that were effective in reducing or alleviating stress. There is definitely a gap in the knowledge between identifying stress and (1) nurses' responses to work-related stress; (2) identification of effective methods of coping; and (3) stress reduction interventions. The use of humor is an example of a relatively untested stress reduction or coping technique that is already being used in the critical care setting. However, there is evidence to support the potential use of humor as a conscious, therapeutic means of reducing work-related stress. It is the intent of this study therefore, to examine stress in the critical care environment and to describe the use of humor by critical care nurses as a coping strategy to reduce work-related stress.

Conceptual Framework

The conceptual framework of this study was based on Lazarus' model of the psychology of stress built on the concepts of cognitive appraisal and coping. In contrast to other unidirectional, antecedent-consequent models, Lazarus uses a transactional model which "views the person and the environment in a dynamic, mutually reciprocal, bidirectional relationship" (Lazarus & Folkman, 1984, p. 293). These reciprocal relationships are mediated by the cognitive processes of appraisal and reappraisal relevant to coping. Because cognitive appraisal involves an individual's subjective interpretation of a transaction it is phenomenological, which by definition "refers to private ways of thinking that have no necessary relationship with objective reality" (Lazarus & Folkman, 1984, p. 47).

In this study involving critical care nurses, it would follow then that when confronted by a potentially stressful situation, the individual nurse engages in the process of cognitive appraisal in order to determine the personal significance of the event by asking "Am I in trouble or being benefited, now or in the future, and in what way?" (Lazarus & Folkman, 1984, p. 31). If the event is seen as irrelevant or benign, the process is terminated. However, if a stressful event is perceived, secondary appraisal occurs and the individual asks "What, if anything, can be done about it?" (Lazarus & Folkman, 1984, p. 31). This evaluative process takes into account which coping options are available and the likelihood that a given option will be effective. This study also examines the individual nurse's use of humor as an emotion-focused coping option and its perceived effectiveness. A diagram of the Lazarus model designed by the investigator is presented in Figure 1 to show the relationship among the major variables of this study.

Stress

Lazarus and Launier (1978) define stress as a "relational or transactional concept describing certain kinds of adaptive commerce between any system (e.g., a person), and an environment" (p. 239). The three important stress relationships are: harm-loss, threat, and challenge. The "relationships refer neither to person nor environment as separate sets of variables, but they describe a balance of forces such that environmental demands tax or exceed the resources of the person" (Lazarus & Launier, 1978, p. 288).

Stress may be a result of social, cultural, psychological or physiological factors. The meaning of an event will vary from one individual to the next and may interact with a whole constellation of stressors from other aspects of the person's life. All of these factors contribute to the individual's level of stress and if they are not "neutralized" somehow, can result in harmful consequences.

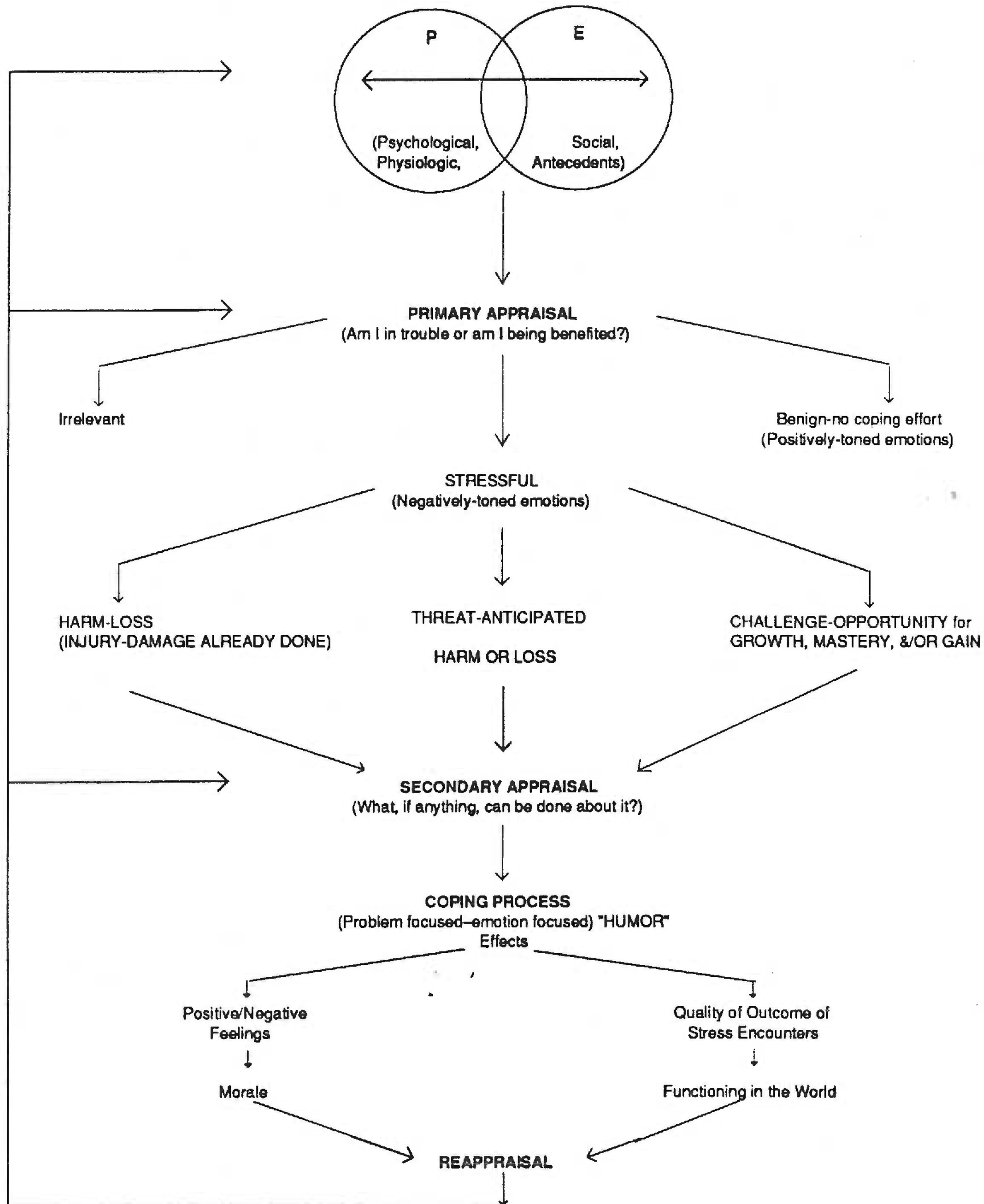

Figure 1. Conceptual Framework

Cognitive Appraisal

"Cognitive appraisal can be most readily understood as the process of categorizing an encounter, and its various facets, with respect to its significance for well-being" (Lazarus & Folkman, 1984, p. 31). Primary appraisal is an evaluative step or a judgment that an event is: (1) irrelevant, of no consequence in its present form; (2) benign, resulting in positively-toned emotions, no coping effort required; or (3) stressful which results in negatively-toned emotions (Folkman & Lazarus, 1980; Lazarus, 1982; Lazarus & Folkman 1984; Lazarus & Launier, 1978). Stress appraisals may be interpreted as producing harm or loss (referring to damage already done), or as a threat (referring to anticipated harm or losses), or as a challenge (events that hold the possibility of mastery or gain) (Lazarus, 1982; Lazarus & Folkman, 1984). These appraisals are not mutually exclusive, as an event that is perceived as holding the potential for gain may also entail increased demands for performance that may overwhelm the individual.

Secondary appraisal evaluates what might and can be done. "It includes an evaluation about whether a given coping option will accomplish what it is supposed to, that one can apply a particular strategy in the context of other internal and/or external demands and constraints" (Lazarus & Folkman, 1984, p. 53). It is during this process of secondary appraisal that the individual would contemplate using humor and evaluate its appropriateness.

There is another step in the appraisal process, that of reappraisal. Lazarus and Launier (1978) described it as a change in the original appraisal, based on feedback from the person and environment interaction. This could include ongoing individual reactions

to an event and/or changes in the environment. "A reappraisal is simply an appraisal that follows an earlier appraisal in the same encounter and modifies it" (Lazarus & Folkman, 1984, p. 38).

Coping

Lazarus and Folkman (1984) define coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p.141). Because this definition is concerned with what a person actually thinks or does in a situation in contrast to what he/she usually does, it is process rather than trait oriented. This definition also allows for changes that occur as the stressful situation unfolds and is reappraised.

"Coping serves two overriding functions: managing or altering the problem with the environment causing distress (problem-focused coping), and regulating the emotional response to the problem (emotion-focused coping)" (Lazarus & Folkman, 1984, p. 179). Emotion-focused coping is often directed at lessening emotional distress and finding positive value in negative events, whereas, problem-focused efforts are often directed at defining problems and generating alternative solutions (Lazarus & Folkman, 1984). The use of humor, therefore, would most likely be included in emotion-focused methods rather than problem-focused.

The use of humor versus other coping strategies could also be determined by constraints that would mitigate its use. "Personal constraints include internalized cultural values and beliefs that proscribe certain ways of behaving" (Lazarus & Folkman, 1984, p.179), social skills, social support, and general beliefs about control. Environmental constraints might include institutional policies.

Lazarus and Folkman (1984) also discuss how appraisal and coping can affect three classes of adaptational outcomes: (1) social functioning, (2) morale, and (3) somatic health. Social functioning is determined by the long-term effects of how well an individual copes with day-to-day living. Morale is a result of emotions generated in specific encounters. "Morale over the long run probably depends on a tendency to appraise encounters as challenges, to cope with negative outcomes by putting them in a positive light, and, overall, effectively managing a wide range of demands" (Lazarus & Folkman, 1984, p. 224). Stress, emotion, and coping can also impact on physical health and well-being. Lazarus and Folkman (1984) discuss whether there is a specificity or generality in the relationship between stress, emotion, and coping (i.e., are different styles of coping related to specific health outcomes). However, when considering the consequences of coping, multiple outcomes are possible, not always a single adaptational outcome. "The major adaptational outcome of any transaction that has involved coping often depends on a complicated tradeoff of costs and benefits, or divergent values about what is positive and negative, important and unimportant" (Lazarus & Folkman, 1984, p. 222) .

In summary, coping processes are designed to help the individual to manage a situation according to how it is cognitively appraised. Lazarus' model of stress and coping includes: (1) primary appraisal, (2) secondary appraisal, (3) reappraisal, and (4) coping and (5) the individual adaptational outcomes.

Purpose

The overall purpose of this study was to describe how critical care nurses use humor to cope with work-related stress. The use of humor was described "in general" (with

whom it is used, when it is used, and the type of humor used), and in an incident-specific situation.

The sources of stress, the present level of work-related stress, the amount of stress "in general" and usual reactions to stress were also examined from the standpoint of individual appraisal.

The following research questions were addressed:

1. What nurse characteristics are factors in the effectiveness and frequency of humor use by critical care nurses to reduce work-related stress?
2. What is the relationship between the amount of perceived work-related stress and the overall amount of humor used in the unit?
3. Will those critical care nurses who appraise the greatest source of work-related stress as arising from interpersonal relationships, management, or patient care, use humor (emotion-focused coping) more frequently and find it more effective than those nurses who perceive the environment or knowledge and skills as the greatest source of stress?
4. What is the relationship between the perceived effectiveness of humor use, in general, and its effectiveness relative to a specific incident?

CHAPTER II

METHODS

Subjects and Settings

The subjects of this study included a convenience sample of 34 registered nurses who worked in adult medical, surgical, or coronary intensive care units or a combination thereof. Criteria for entry into this study were: 1) scheduled full-time employment or a minimum of 16 hours per week and 2) participation in direct patient care. Nurses from all shifts (days, evenings, and nights) were included. It was determined that 159 nurses from the two hospitals met the criteria for this study. Out of this population, 34 nurses volunteered to participate (21 percent response rate).

The settings for this study were adult intensive care units in one of two facilities: a 350-bed university teaching hospital; and a 320-bed non-profit hospital both located in Portland, Oregon. The units included an 8-bed coronary care and post open heart recovery unit; a 10-bed coronary care unit; an 11-bed trauma and medical-surgical intensive care unit; a 10-bed neurosurgical and surgical intensive care unit; and a 12-bed cardiac recovery unit (post open heart surgery).

Data Collection Instruments

Background Characteristics Form

The Background Characteristics Form (See Appendix A) was developed to gather information that assisted in describing the sample of this study. This included demographic characteristics such as age, sex, marital status, educational background, and selected

experiences in nursing such as years of work as a nurse, shift worked, type of unit where presently employed, continuing education, and additional certifications (Advanced Cardiac Life Support; Critical Care Registered Nurse).

Stress-Humor Survey Form

The Stress-Humor Survey Form (See Appendix B) was designed by the investigator after a literature review failed to disclose an appropriate tool for assessing nurses' perceptions of the use of humor in the critical care area as a coping strategy for reducing work-related stress. The questionnaire is described in the following section.

Part I, Question 1 involved the nurses' individual sources of work-related stress. The first item in this section listed five sources of work-related stress and required that the respondents rank-order their appraisal of these items from 1 to 5 with a rating of 1 indicating the greatest source of stress and a 5 the least source of stress. The subjects could also offer their own suggestions by selecting the "other" category and indicating a specific source of individual stress for them. Question 1 was based on the results of the survey conducted by Bailey et al. (1980) to identify sources of stress in the ICU. In that particular survey of 1800 nurses, over 80 percent of the respondents indicated that stressors fell within the categories of patient care, management of the unit , and interpersonal relationships. In addition, knowledge and skills and physical work environment were identified as stressors but represented less than 20 percent of the perceived stressors in the ICU.

The second item of Part I asked each subject to select five affectively-toned adjectives from a list of 14 to describe how he/she generally reacted to stress. The adjectives listed in Question 2 related to the positively or negatively-toned emotions that are generated after a situation has been assessed in terms of primary appraisal in Lazarus' model (Lazarus &

Folkman, 1984). Primary appraisal carries three implications for the individual: harm-loss, threat or challenge. Seven of the adjectives listed indicated a positively-toned reaction to stress (challenged, energetic, self-assertive, confident, motivated, resourceful and competent), and seven adjectives indicated a negatively-toned response (angry, anxious, frustrated, depressed, tired, ineffective, and threatened). By asking each nurse to select the five most common responses he/she associated with work-related stress, a final cumulative response was calculated by scoring a plus 1 for each positively-toned adjective and a minus 1 for each negatively-toned selection. The total scores could range from a plus 5 to a minus 5. Since there was an odd number of choices the score would never equal zero. Based on the scores of their selections the subjects were listed as having an overall positive or negative response to stress. Subjects could also indicate responses other than those listed by writing in an adjective of choice in the other category. These responses were considered individually and subsequently given a positive or negative value based on the general "tone" of the adjective.

Part II of the questionnaire also related to primary appraisal of work-related stress but included secondary appraisal of humor as a coping strategy. Secondary appraisal is a "complex evaluative process that takes into account which coping options are available, the likelihood that a given coping option will accomplish what it is supposed to, and the likelihood that one can apply a particular strategy or set of strategies effectively" (Lazarus & Folkman, 1984, p. 35). In the Lazarus model both primary and secondary appraisal occur relative to a specific incident. For purposes of this study, subjects first appraised the overall or general use of humor and then were asked in Part III to evaluate the use of humor as coping strategy in an incident specific situation.

Questions in Part II assisted in determining when, with whom, for what purpose, and how effectively humor was being used. Questions 1-8a were specific to the individual participants whereas Questions 8b-10 involved an appraisal of the humor used by co-workers and contributed to an overall perspective of humor use in the individual units. Degrees of stressfulness or effectiveness were used as the response options for questions 1, 2, 6, and 7 to indicate the individual's appraisal of work-related stress. The score was determined by the frequency of responses. Question 3 addressed the frequency of individual humor use scaled from daily, weekly, monthly, to never. Questions 4, 5, and 8 sought information about the type of humor used, who was involved in the humorous interactions and why they used humor. Questions 4 and 5 involved rank ordering of responses with a 1 indicating most often and a 5 least often. The options offered in Question 5 were based on Robinson's (1977) study of humor in the health care setting. Her data relating to the purpose of humor use in nursing situations were incorporated directly. Subjects were also given the option of choosing the "other" category and specifying a purpose of their own choosing. Again responses were scored based on frequency of response. Question 10 assessed the participants appraisal of the overall use of humor in the unit. In the study by Leiber (1982) Cantrell's ladder was used to gather similar data. Subjects were given the options from "no humor is used" to "an extreme amount of humor is used", paralleling the word sets used in the Leiber study.

The format in Part III was designed to solicit an incident-specific response to stress. The participant was asked to describe a situation during which he/she used humor within the past two weeks to relieve work-related stress. As has been noted, in accordance with the Lazarus model (Lazarus & Folkman, 1984), stress and coping analysis should be incident-specific which reflects what occurred in a specific encounter rather than what is

usually done across many situations. The narrative format contributed to an understanding of the dynamics of the situation during which humor was used and illustrated coping techniques and perceived results of the intervention. Questions 1-4 in Part III elicited responses to the incident that was previously described in the narrative. These responses were of primary concern in evaluating the usefulness of humor in a situation and focused on the needs which were being served rather than the technique or content of the humor. Also, these responses could be compared with those obtained in the earlier section of the questionnaire. Consequently, since Questions 1-4 in Part III and Questions 1, 2, 6, and 7 in Part I were written in the same format, the data could provide information relative to the similarities or differences between humor use in general with those related to a specific incident.

Question 5 (Part III) served as a means of clarification as to the exact role the participant played in the humorous exchange (primary instigator, participant but not the instigator, or observer but not a participant).

Design and Procedure

A descriptive design was used. The data collection period was approximately one month in March of 1986. Initial contact with the nursing units was made using an established protocol for each institution. There was some concern expressed by administrative personnel at the university hospital about the length of time involved in completing the questionnaires (20 -30 minutes). Therefore, the staff were allowed to take the forms home and return them by mail. Contact was made between researcher and participants during distribution of the forms so that directions could be given, the tools examined, and questions answered. A printed list of instructions for the questionnaires was read aloud before subjects started answering the questions. A copy of the written directions was also

given each participant to aid in clarification. (See Appendix C). The nurse managers of each of the individual units assisted the investigator in establishing the most effective means of contacting their staff and acquiring volunteers to participate in the study. During the changes of shift when there was staff overlap and after scheduled unit meetings seemed to be the most propitious times. The nurses on each of the shifts were offered a choice of at least two different times for completion of the forms. The procedure was similar in all units. During the data collection period, the investigator, or designee, visited the participating units. The designee was a baccalaureate prepared nurse who had also participated in data collection for the Leiber (1982) study. The designee was familiarized in advance with both tools and completed the forms herself to allow her to facilitate in clarifying both the procedure and format for the subjects.

The unit visits were made during a pre-scheduled unit meeting or at another scheduled time of convenience, to explain the tool and distribute it to the registered nurses who qualified and volunteered to participate. A quiet area away from the unit was utilized. It was evident that the staffing patterns in the critical care areas were only going to allow 10-15 minutes for completion of the questionnaires. However, only about one-fourth of the subjects found it necessary to take the forms home with them. A stamped and addressed envelope was provided to expedite the return of the questionnaires. Subjects were asked not to discuss the questions or to share the narratives they described until after the data collection was completed on their unit. Times for data collection were posted on the unit well in advance . Coffee and doughnuts were provided at each session on the unit to encourage attendance. Nurses from all three shifts participated in the study.

All potential nurse participants received a copy of the Nurse Informed Consent letter (Appendix D) so rights to privacy would be emphasized. However, because the study received "Exemption from Human Subjects Review" status, it was not necessary to obtain written consent.

Pilot Study

The Stress-Humor Survey Form was pilot tested to determine item and format clarity, and to see if the narratives (Part III) would lend themselves to content analysis.

A convenience sample of five critical care nurses employed at a 150–bed, local, proprietary hospital was utilized. Each participant was given the questionnaire and while the researcher was present to observe and note any difficulties encountered, the subjects completed the form. After each participant was finished, the time for completion was noted and a set of questions was asked regarding clarity of the instructions and items. Revisions were made on the basis of input from this group.

The pilot study was female (100%) with a mean age of 33.2 years. All of the subjects were staff nurses in a 6-bed coronary and medical-surgical intensive care unit. The nurses represented all three shifts and each had been employed at that facility for at least 3 years. The responses of this small panel of experts were valuable as the group closely matched the projected target sample for this study.

Content validity for both tools used in this study was evaluated by a panel of four professionals. Those with a background in nursing education and nursing research were selected for their expertise.

Data Analysis

Descriptive statistics were used to present data, to see the distribution of items and to look at selected responses. Comparisons between effectiveness of humor use and (1)

nursing education, (2) shift worked, (3) type of unit, and (4) employment status were analyzed by use of the chi-square test. A chi-square test was also performed to examine the relationships between overall humor use and (1) amount of perceived job stress and (2) the greatest source of work-related stress.

The Friedman two-way analysis of variance was used to examine (1) the rank ordering of subjects' work-related stress by type of hospital, (2) the rank-order of participants in humorous interactions with the subjects, and (3) the rank-ordering by subjects of the purpose of humor use in nursing situations.

A chi-square test was used to determine whether the effectiveness of humor use in general differed from the use of humor in an incident-specific situation.

CHAPTER III

RESULTS AND DISCUSSION

The results and discussion are presented in the following order. First, descriptive data are given pertaining to: (1) the sample in reference to demographic characteristics and work-related characteristics, (2) critical care nurses' perceptions of work-related stress, (3) the use of humor by these nurses as a method of coping with work-related stress, and (4) the use of humor relating to a specific incident. Second, the findings related to the four research questions are presented and discussed.

Description of Subjects

The voluntary participants in this study were 34 registered nurses who were employed at one of two facilities: a 350–bed,university hospital (41%) or a 320–bed, metropolitan proprietary hospital (59%). Data from each hospital were examined separately. A low response rate and the use of a convenience sample allowed for the potential of bias in the study. It was important to examine both groups to see if they were contradicting each other. The similarities in the nurses from the proprietary hospital and the university hospital gave more credence to the results. Where approprite, the results were examined by individual hospitals, otherwise collective findings were reported. The subjects were primarily Caucasian, females in their mid-thirties. Approximately two-thirds had achieved a baccalaureate degree in nursing and were either married or partnered (See Table 1). Of the total participants, 14 were employed at the university hospital and 20 at the metropolitan, proprietary hospital. Employees at the university hospital were expected to participate in ongoing research. For those nurses at the metropolitan hospital it was a relatively new experience.

Table 1

Demographic Characteristics of the Subjects

Characteristic	University Hospital N=14		Proprietary Hospital N=20	
	Number	Percent	Number	Percent
Age				
Mean (years)	31.6		33.6	
Standard Deviation	4.5		4.83	
Range	16		17	
Sex				
Female	13	93	19	95
Male	1	7	1	5
Marital Status				
Never Married	4	29	5	25
Married/Partnered	10	71	13	65
Divorced/Separated	0	0	2	10
Ethnic Background				
Caucasian	13	93	19	95
Asian/Eurasian	1	7	1	5
Highest Nursing Degree Obtained				
Diploma/Associate	4	29	7	35
Bachelors/Masters	10	71	13	65

In reference to work-related characteristics: the majority were staff nurses; three-quarters of them worked days or evenings; equal proportions were employed full-time and part-time. The subjects were evenly distributed in regard to the type of unit in which they worked. The amount of critical care nursing experience ranged from 5 months to 20 years (See Table 2).

The subjects were also asked questions relating to continuing education and certifications. The group, in general, attended critical care conferences and sought to maintain advanced level of practice with national certifications (Advanced Cardiac Life Support or Critical Care Registered Nurse). However, only 2 subjects had attended a conference or workshop pertaining to humor (See Table 3).

Sources of Stress and Reactions to Work-Related Stress

Consistent with the findings of Bailey et al. (1980), the sources of greatest work-related stress for the nurses were interpersonal relationships, management of the unit, and patient care. Knowledge and skills were the least sources of stress. The results indicated that the most stressful work situations for these nurses were those that involved another person, whether it was another staff nurse, patients, physicians or administrative personnel. A Friedman's test showed that there were differences in the rank-order for sources of stress (university hospital nurses at the .05 level and proprietary hospital nurses at the .011 level) (See Table 4).

It should be noted that the categories of sources "stress" and "satisfaction" that were used by Bailey et. al. (1980) were developed using a critical incident technique. The separation of patient care activities from knowledge and skills may not give a good reflection of nursing practice in the 1980's. Nursing educators today see patient care as involving both *thinking* and *doing* in an integrative manner. This instrument was used in

Table 2

Work Related Characteristics of the Subjects

Characteristic	University Hospital N=14		Proprietary Hospital N=20	
	Number	Percent	Number	Percent
Employment Status				
Full-Time[a]	9	64	8	40
Part-Time[b]	5	36	12	60
Area of Practice				
Medical/Surgical				
Intensive Care Unit (ICU)	2	14	10	50
Coronary Care (CCU)	5	36	8	40
Combined Unit (CCU/ICU)	7	50	2	10
Position				
Staff Nurse	12	86	16	80
Assistant Head Nurse	1	7	1	5
Head Nurse	0	0	2	10
Other[c]	1	7	1	5
Shift Worked				
Days	6	43	8	40
Evenings	4	29	7	35
Nights	4	29	4	20
Rotational	0	0	1	5
Experience				
Total: Nursing				
Mean (years)	8.39		11.30	
Standard Deviation	3.36		5.55	
Critical Care Nursing				
Mean (years)	7.0		9.0	
Standard Deviation	3.8		6.04	

[a]More than 36 hours/week
[b]16-36 hours/week
[c]Critical care nurse clinician; Trauma R.N.

Table 3

Continuing Education Experiences of the Subjects

Type of Experiences	University Hospital N=14		Proprietary Hospital N=20	
	Number	Percent	Number	Percent
CCRN Certification[a]				
Yes	5	36	3	15
No	8	57	17	85
Missing	1	7	0	0
ACLS Certification[b]				
Yes	5	36	16	80
No	8	57	4	20
Missing	1	7	0	0
Death & Dying Courses/Workshops				
Yes	8	57	8	40
No	5	35	11	55
Missing	1	7	1	5
Stress/Stress Management Courses/Workshops				
Yes	7	50	8	40
No	6	43	11	55
Missing	1	7	1	5
Critical Care Courses/Workshops				
Yes	12	86	18	90
No	2	14	2	10
Humor Workshops/Conferences				
Yes	2	14	0	0
No	11	79	19	95
Missing	1	7	1	5

[a]Critical Care Registered Nurse
[b]Advanced Cardiac Life Support

Table 4

Rank-Order of Subjects' Work-Related Stress by Type of Hospital

Source of Stress	Mean[a]	Rank
Interpersonal Relationships		
University Hospital[b]	2.42	1
Proprietary Hospital[c]	2.35	1
Total	2.26	1
Management of the Unit		
University Hospital	3.07	2
Proprietary Hospital	2.7	2
Total	2.96	3
Patient Care		
University Hospital	3.14	3
Proprietary Hospital	2.8	3
Total	2.94	2
Physical Work Environment		
University Hospital	3.21	4
Proprietary Hospital	3.45	4
Total	3.23	4
Knowledge and Skills		
University Hospital	4.0	5
Proprietary Hospital	3.85	5
Total	3.91	5

[a]Indicates the mean of the ranks for each of the sources of stress
[b]N=14
[c]N=20

this study because it reported data from a large sample of nurses representative of numerous regions in the United States. However, it should be noted that as new instruments are developed, the tool used may not be a valid indicator of the current standards of practice.

Responses to work-related stress were then assessed. First, the positive or negative feelings that the stress generated, as selected by each respondent, were recorded in a frequency table. Each descriptive adjective was also given value of plus 1 (for positive feelings) or minus 1 (for negative feelings). A total was obtained by adding these values together. The potential range of these scores was from plus 5 to minus 5. A total plus score was interpreted as the subject's positive response to stress and a total negative score as a negative response to stress. The five adjectives that were selected most frequently were the following: challenged (+), frustrated (-), angry (-), tired (-), and anxious (-). Four of these choices were negatively-toned, but only 50% of the sample had an overall negative response (less than 0) to stress while 50% had an overall positive response (greater than 0). Four of the subjects selected all positively-toned adjectives and five subjects selected all negative responses.

The Use of Humor in Coping with Work-Related Stress

Questions 1 and 2 (Part II) addressed general or overall work-related stress, and the level of job-stress at the present time. The frequency of these responses was tabulated. Approximately three-fourths of the subjects indicated that they currently found their job to be only slightly to moderately stressful and the findings were similar when overall job stress was evaluated. A very small percentage felt that their jobs were extremely stressful and a few even indicated that they did not feel any work-related stress, either now, or in general.

Question 3 (Part II) was intended to assess the frequency of humor use and subsequently allow for a testing of relationships between nurse characteristics, levels of stress and frequency of humor use. However, over 90% of the subjects selected the category daily (verses weekly, monthly, less than monthly but do use it and never) to indicate frequency of humor use. Consequently, the item did not discriminate among the subjects and it essentially did not function as a variable in this study. Therefore, further examination of other factors related to frequency of humor use was not possible. It should be noted, however, that every participant in the study used humor at some time while at work.

Question 4 (Part II) allowed for a rank-ordering of those individuals with whom the subjects could share a humorous interaction in the health care setting. Critical care nurses from both hospitals were most likely to use humor with other nurses and least likely to involve a patient's family member. Patients, physicians, and other hospital employees were also included in the humorous exchanges but they occurred less frequently than the exchanges with other nurses. A Friedman's nonparametric analysis of variance by ranks showed that this ordering of persons was significant for nurses in each hospital at the .001 level (See Table 5). All future references to the Friedman's test will include only the combined results from both hospitals as the findings by individual hospitals were very similar.

Items were rank-ordered in Question 5 (Part II) to indicate the three most common purposes of using humor. The data indicates that humor was used primarily to relieve anxiety, stress, and tension, and to establish relationships. It was least likely to be used as an escape from reality or as a socially acceptable outlet for anger or hostility. The findings, relating to this use of humor to reduce stress, agree with the results

Table 5

Rank-Order of Participants in Humorous Interactions with the Subjects by Type of Hospital.

Participants	Mean[a]	Rank
Other Nurses		
University Hospital[b]	1.0	1
Proprietary Hospital[c]	1.1	1
Total	1.06	1
Physicians		
University Hospital	2.76	3
Proprietary Hospital	2.95	2
Total	2.88	2
Patients		
University Hospital	2.62	2
Proprietary Hospital	3.20	4
Total	2.97	3
Other Hospital Employees		
University Hospital	4.38	5
Proprietary Hospital	3.0	3
Total	3.54	4
Families of Patients		
University Hospital	4.23	4
Proprietary Hospital	5.25	5
Total	4.54	5

[a]Indicates the mean of the ranks of each of the participants in humorous interactions.
[b]N=13
[c]N=20

reported by Leiber (1982). She found that humor was effective 98 percent of the time when used to reduce anxiety or stress. Robinson (1977) also reported that nurses use humor frequently as a means of dealing with job-related stress and tension. Additional reasons for the use of humor that were indicated by some subjects in the "other" category in this present study were: boredom, just to have a good laugh, and to have fun. A Friedman's analysis of the data showed variation significant at the .001 level (See Table 6).

Questions 6 and 7 (Part II) related to the effectiveness of humor use. Most of the subjects found humor to be moderately to extremely effective in reducing the amount of work-related stress. This is supported by the fact that more than 90 percent of the nurses used humor daily. No one found humor to be totally ineffective. Ninety-four percent of the subjects also felt less stressed after using humor. Thus, the similarity in responses to questions concerning frequency and effectiveness of humor use confirm the high degree of association between the use and effectiveness of humor in the workplace.

Question 8 a/b (Part II) sought responses of the type of humor used by the nurses themselves and by co-workers. The responses indicated that playful humor was the type most often used and appreciated by both groups. Sarcastic and/or morbid humor were also a part of humorous exchanges but were not used as frequently. This could be a reflection of society's tendency to find sarcastic and morbid humor less socially acceptable as well. Even though anonymity was assured, some nurses may have been reluctant to report the successful use of sarcasm, so the results might be biased in favor of the use of playful humor. However, since those interactions involving some type of playful humor were reported to be most effective in reducing stress and most

Table 6

Rank-Order of the Purpose of Humor Use in Nursing Situations by Type of Hospital

Purpose	Mean[a]	Rank
To relieve anxiety, stress and tension		
University Hospital[b]	1.57	1
Proprietary Hospital[c]	1.35	1
Total	2.14	1
To establish relationships		
University Hospital	2.14	2
Proprietary Hospital	2.65	2
Total	2.45	2
To release anger, hostility, and/or aggression in a socially acceptable way.		
University Hospital	2.92	3
Proprietary Hospital	2.85	3
Total	2.88	3
As a means of escape from reality.		
University Hospital	3.42	4
Proprietary Hospital	3.6	4
Total	3.52	4

[a]Indicates the means of the ranks for each of the purposes of humor use.
[b]N=14
[c]N=20

appreciated by co-workers, it needs to be noted that the humor used in the critical care setting does have a playful component. In Question 9 (Part II) subjects were also asked to indicate whether the use of humor by co-workers was helpful in reducing work-related stress. Three-fourths of the subjects recorded that it was moderately to highly helpful. Only one participant indicated that it was not helpful at all. Question 10 (Part II) evaluated the overall use of humor by the staff. Even though more than 90 percent of the respondents had already indicated that they used humor on a daily basis nearly 60 percent of the subjects felt that only a moderate amount of humor was used in their unit.

The Use of Humor Related to a Specific Incident

Subjects were asked to write a paragraph describing an incident that occurred at work during the past 2 weeks, during which they used humor (Part III). Questions similar to those in Part II (involving the use of humor in general) were asked relative to the incident that they had described. As before, most of the nurses indicated that their level of stress was less after the use of humor but in most instances, humor had only been slightly to moderately effective in decreasing stress. Playful humor was the type most often used. Even though the subjects were asked to describe an event where *they* used humor at work, the subject him/herself was the primary instigator of the humorous exchange a little more than half the time. Two examples taken from this study, describing how humor was used in a stressful situation, are presented in the following paragraphs. These paragraphs illustrate that humorous exchanges can often be difficult to describe and that the phrase "you had to be there to appreciate it" could be appropriate. However, some subjects were very successful in capturing the moment. (For additional examples see Appendix E).

Example 1:

A critical cardiac patient was having a Swan Ganz catheter inserted in the middle of the night by one of "our" infamous cardiologists. Things were going relatively smoothly--procedure wise--when a co-worker(nurse) turned and tripped over a cable and "gracefully" dislodged the newly positioned catheter. Needless to say, the Dr. and nurse involved were a little upset at seeing the S.G. cath lying neatly coiled on the floor. I was standing at the foot of the bed and quickly popped up with, "Well (nurse), I see those years of studying with the New York Ballet Company really paid off!" Everyone started to laugh and one liners were tossed back and forth. The procedure was restarted and everyone stayed in good humor.

Example 2:

The patient in bed 5 was on a balloon pump that was ineffective in augmenting his cardiac output and keeping his B/P up. The Dr.s would not use any vasopressors. After 6 hours of nonstop attempts to bring up the B/P (feet up, albumin, etc.) & feeling exhausted, I looked at a co-worker and said , "I don't know what else to do if the Dr.s won't help". (I was leaning against the wall and slid down, sat on the floor and said), "I'm not moving for a few minutes (the patient) will just have to keep his blood pressure up himself". Maybe you had to be there to appreciate it. But my comment gave us all (myself included) a much needed, laughter break.

Research Question 1

The first research question asked: are nurse characteristics (specifically: education, type of unit where employed, shift worked, and employment status) factors in the effectiveness and frequency of humor use by critical care nurses to reduce work-related stress? (See Table 7)

The problems involved with using frequency of humor use as a variable have been previously addressed. It was the contention of this investigator that those nurses with

Table 7

Relationship Between Effectiveness of Humor Use and (1) Nursing Education, (2) Shift Worked, (3)Type of Unit, and (4) Employment Status (N=34)

	Effectiveness of Humor Use		
	None-Moderate	Highly-Extremely	Chi-Square (df=1)
Nursing Education			.283
BSN/Masters	10	13	
ADN/Diploma	4	7	
Shift Worked			.374
Days	5	9	
Evenings/Nights	8	12	
Type of Unit			.116
ICU/Combined[a]	9	12	
CCU[b]	4	9	
Employment Status			.5
Full-Time	8	9	
Part-Time	5	12	

[a]Medical or surgical intensive care units or combination of medical/surgical/cardiac intensive care
[b]Coronary care units

more experience and education would most likely feel most relaxed and, therefore, be more inclined to use humor more frequently; however, this relationship could not be verified. chi-square tests were conducted to test the relationships between: (1) effectiveness of humor use and nursing educational background, (2) effectiveness of humor use and shift worked, (3) effectiveness of humor use and type of unit, and (4) effectiveness of humor use and employment status. No significant relationships were found.

Research Question 2

The second research question was: what is the relationship between the amount of perceived work-related stress and the overall amount of humor used in the unit? (See Table 8)

This investigator felt that there would be a very strong, direct relationship between the amount of perceived work-related stress and the overall amount of humor used in the different units. However, a chi-square test of the relationship between overall humor use and amount of perceived job stress indicated that there was no statistical significant relationship in this study. It can be noted that two-thirds of the subjects who perceived their job as moderately to extremely stressful also felt there was a moderate to large amount of humor used in their units. However, the participants who saw their job as only slightly stressful also felt that moderate to extreme amount of humor was used on the unit.

Research Question 3

The third research question was: will those critical care nurses who appraise the greatest sources of work-related stress as arising from interpersonal relationships, management of the unit, or patient care, use humor (emotion-focused coping) more frequently and find it more effective than those nurses who perceive the environment or knowledge and skills as the greatest source of stress?

Table 8

Relationship Between Overall Humor Use and (1) Amount of Perceived Job Stress and (2)The Greatest Source of Work-Related Stress (N=34)

	Overall Humor Use		
	None-Small	Moderate-Extreme	Chi-Square (df=1)
Amount of Job Stress			.935
None-Small	2	5	
Moderate-Extreme	6	21	
Greatest Source of Stress			.025
Related to Person[a]	7	19	
Related to Environment[b]	1	7	

[a]Interpersonal Relationships; Management of the Unit; Patient Care
[b]Knowledge and Skills; Physical Work Environment; Other: Skills and Environment

This question was based on Lazarus's definitions of stress and coping. Since emotion-focused coping involves regulating an emotional response to a problem and problem-focused coping involves managing or altering problems with the environment, it led to the supposition that humor, (emotion-focused coping) would be used most often by those nurses who found the greatest sources of stress in interpersonal relationships or person-person confrontations. For the same reasons as were stated previously, frequency of humor use did not function as a variable and therefore, no relationships could be tested utilizing frequency of humor use as a variable. A chi-square test was done to compare effectiveness of humor use and the primary sources of stress. There was no statistically significant relationship (See Table 8). All of the subjects who found the greatest source of stress in the "environment" also indicated that they found humor to be moderately to extremely effective in reducing work-related stress. It should be noted, however, that a majority of the subjects found interpersonal relationships or "person" involved interactions to be the greatest source of stress and all but two of these nurses indicated that humor was moderately to highly or extremely effective in reducing work-related stress.

It might be argued that humor is both an emotion-focused and problem-focused method of coping. However, since the use of humor almost always involves another participant, whether actively or passively, there is support for the consideration of humor as a means of emotion-focused coping (as noted in the conceptual framework of this study, p. 21).

Research Question 4

The fourth research question was: what is the relationship between the perceived effectiveness of humor use, in general, and its effectiveness relative to a specific incident?

Lazarus's concept of coping formed part of the conceptual framework for this study. Therefore, questions relating specifically to a recent humorous interaction (as related in a written paragraph by each subject) were also used to obtain information about the effectiveness of humor as a coping strategy in an incident specific situation. It was of interest in this study to examine whether or not the degree to which subjects viewed the use of humor as effective was contingent upon their appraisal related to a general assessment or to a specific incident. The results show that the nurses found humor to be less effective when they related it to a specific incident (27 found humor use not effective to moderately effective) than they did when describing the effectiveness of humor use in general (21 found it to be highly to extremely effective). The obtained chi-square of 15.09 (df=1) was significant at the .001 level (See Table 9). However, as the data only reflects one example of how the subjects evaluated one particular humorous exchange, the results would most likely vary should the questionnaire be given to the same subjects at a different time. In order to be consistent with Lazarus' process model, subjects would have to be assessed over time and the results evaluated incident by incident in a longitudinal study. In this study, there was not an opportunity to fully develop this model, and it is unknown what might have occurred over time.

The findings of this study support Lazarus' contention that the effectiveness of any coping strategies is dependent on an individual's appraisal of a particular event as it occurs and that it is difficult to generalize coping strategies as effective or ineffective. The subjects in this study indicated that when humor was used in a specific situation it was, for the most part, slightly to moderately effective in reducing work-related stress. Only one participant did not find it effective at all. Almost all of the subjects experienced some reduction in stress whether they were actually the instigator of the humorous exchange or

Table 9

Relationship Between Effectiveness of Humor Use in General and the Effectiveness of Humor Use in an Incident-Specific Situation (N=33)

	Humor Use	
Effectiveness	General	Specific
None-Moderate	13	27
Highly-Extremely	21	6

Chi-Square = 15.09 (df =1). Significant at the .001 level

simply an observer. In contrast, the use of humor in "general" was rated a highly to extremely effective coping strategy to a greater extent than it was in an incident specific situation. In both instances, the use of humor was most effective but the degree of effectiveness varied.

It appears that humor was used a great deal by critical care nurses to cope with work related stress. The humorous exchanges occurred primarily among nurses, even though nurse-patient and nurse-physician interactions were often identified as sources of large amounts of work-related stress. It could be recommended then, that the judicious use of humor with patients and/or physicians by nurses be considered. It should also be noted that while a review of nursing literature revealed that there were many studies that dealt with identification of the sources of stress in the critical care environment, and its deleterious effects on nurses, there were only two that examined the positive effects of work-related stress (Bailey et al, 1980; Bilodeau, 1973). Lazarus and Folkman (1984) contend that stress can be appraised as challenging as well as harmful or threatening. Since nurses in this study selected numerous positively-toned adjectives to describe responses to stress it might be an indication that further investigation into the positive effects could reveal information that would assist in minimizing the negative effects of job-stress and promote increased psychological and physical well-being in critical care nurses. Those nurses deemed to be coping effectively could be studied to determine the positive measures utilized.

Limitations of the Study

There are many limitations inherent in this study. One of the most obvious limitations is that the tools were developed specifically for this study, and received little testing for reliability and validity. This alternative was chosen as there were no standardized

instruments available specific to the purposes of this study. Further, the instruments entailed only self-report data.

Another limitation was the small sample size that was self-selected. An N of 50 was anticipated, but due to the high patient acuities and staffing shortages in the units it was difficult to generate interest in participating in a study that might involve the use of some off duty time on the part of the potential subjects. It may be that those nurses who participated in the study were among the lesser stressed nurses on the unit as they were willing to devote their time and energy to participate in the study. The willing participants may have been those who were interested in humor and they may have had biases that could have influenced the results.

It should also be noted that anytime subjects are asked for their perceptions of stress, humor and coping, it is highly subjective. Also, in reference to sources of stress the subjects were asked to rank order, there was no opportunity for the nurses to indicate that a category was *not* a source of stress for him/her. The nature of this type of question did not allow for determining the relevance of each area and whether or not the sources of stress would be rated equally.

Lastly, the generalizability of this study may be limited by the previously untested data collection instruments, the small sample size, and the specific nature of the units and hospitals selected for the study.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Repeated exposure to life-threatening crisis situations, complex technology, critical care decision-making responsibilities, and an overstimulating environment may place critical care nurses at high risk for experiencing both emotional and physical reactions to stress. The degree of the manifestations of this work-related stress depends on the individual's ability to cope effectively. Humor has been identified by some health care professionals as a means of coping with anxiety and work-related stress. The purpose of this study was to examine sources of stress in the critical care environment and nurses' reactions to this stress, and to assess the use of humor within the critical care setting as an effective coping strategy for reducing work-related stress. The Lazarus and Folkman model (1984) of stress and coping provided the theoretical base for this study.

Thirty-four of the 159 registered nurses from two Portland hospitals, who met the criteria for participation, volunteered as subjects. Data were collected by means of questionnaires that were specifically designed for this study: The Background Characteristics Form; and the Stress-Humor Survey Form. At prearranged times, the participants met with the investigator or her designee and were given instructions for completion of the forms. Those nurses who were unable to finish the questionnaires, secondary to responsibilities in the unit, were allowed to return the completed documents in a pre-stamped, addressed envelope that was provided.

The following research questions were addressed: (1) What nurse characteristics are factors in the effectiveness and frequency of humor use by critical care nurses to reduce work-related stress? (2) What is the relationship between the amount of perceived work-related stress and the overall amount of humor used in the unit? (3) Will those critical care nurses who appraise the greatest source of work-related stress as arising from interpersonal relationships, management, or patient care, use humor (emotion-focused coping) more frequently and find it more effective than those nurses who perceive the environment or knowledge and skills as the greatest source of stress? (4) What is the relationship between the perceived effectiveness of humor use, in general, and its effectiveness relative to a specific incident?

The effectiveness of humor use relative to nurse characteristics such as educational background, present employment status (full-time vs part-time), shift worked, and unit where presently employed) were examined. No statistically significant relationships were found. Frequency of humor use could not be used to examine contingent relationships as there was no variability in this factor among the subjects. Nearly all the respondents indicated that they used humor daily (versus weekly or monthly). For the most part, the nurse-participants perceived humor as an effective coping strategy and they felt less stressed after initiating or participating in a humorous encounter.

The relationship between the amount of perceived stress and the overall amount of humor used was also not statistically significant. The subjects, in general, did indicate that they themselves used humor more frequently than did their co-workers, e.g. humor was used daily by all but two of the subjects and yet most indicated that only a small to moderate amount of humor was used, overall, in their units.

Using Lazarus' model as the theoretical framework, humor could be categorized as emotion-focused coping and function as a means of regulating stressful emotions. It was suggested then, that those nurses who identified sources of stress as arising from interpersonal encounters would use humor more frequently and find it more effective than those nurses who found person-environment relations as the greatest sources of stress. This was not the case, however, and the relationship between effectiveness of humor use and the sources of stress was not statistically significant.

The Lazarus model also states that an evaluation of the success or failure of a particular coping outcome has to focus on what the person actually thinks and does relative to a specific situation. Therefore, the relationship between effectiveness of humor use by critical care nurses on a day-to-day basis and relative to a specific encounter was examined in this study. The chi-square test did indicate that the relationship was statistically significant. It showed that in incident specific situations, nurses rated the use of humor as less effective in reducing stress than it was when considered in a general perspective.

For the most part, the use of humor by nurses was a positively received and effective means of reducing work-related stress. This might indicate that there is a need to utilize this coping strategy more frequently as a means of improving interpersonal relationships in the work-setting. An examination of the planned use of humor versus its spontaneous, haphazard occurrences within the health care setting might shift the focus of stress studies to include both its positive and negative effects.

Conclusions

The descriptive design of this study using a small convenience sample does not allow for making definitive conclusions. However, the findings are sufficiently interesting to

warrant some concluding remarks. Humor seems to have a place in the critical care environment. However, both staff and management need to recognize and appreciate its utility for it to be used effectively. Guidelines need to be developed relating to humor use so that it can be used therapeutically, and in situations deemed "appropriate". In order to do this further, investigations would have to be done. In this study, "effectiveness" of humor use did not take into consideration the effects on the recipients or bystanders. There is more to humor use than just the individual's present-day evaluation; more of the ramifications need to be explored. The subjects in this study indicated that playful humor was very effective in reducing work-related stress, but it would not be an accurate conclusion to state that this type of humor is the only type being endorsed. Sarcastic and morbid humor were also used and found to be effective. However, there has been a stigma surrounding the use of sarcasm, "Black humor", in the health care setting and nurses may be reluctant to acknowledge the benefits of this type of humor use, especially in light of the lack of social acceptance surrounding humor at another's expense.

It would also appear that in order to evaluate the use of humor as a coping strategy, a longitudinal method should be utilized. There was a significant difference in subjects' perceptions of the use of humor in general and when they related it to a specific incident, irrespective of whether or not they were the instigators or participants in the humorous exchanges.

The results may reflect a bias of this sample as well, since a convenience sample was used and those subjects who volunteered may have been those who valued the use of humor in the critical care areas. They were interested in the topic of humor and,

therefore, chose to participate. Because of the size and characteristics of this group of nurses, no conclusive statement could be made relative to the (1) "characteristics" of effective humor users/facilitators or (2) the appropriateness/effectiveness of humor use in the critical care environment. It would appear that further investigation in this area might be helpful.

It should be noted or recognized that this study did not identify (nor was it intended to) those instances where humor would not be an appropriate response during a stressful situation. The Lazarus and Folkman model (1984) states that no one coping strategy is inherently all good or all bad, so it could be said that humor should be used with foresight, keeping in mind the possible reactions of all individuals involved in the encounter.

Recommendations for Further Research

The following recommendations for further research are suggested as a result of this study. First, because evaluating frequency of humor use, relative to nurse characteristics and conditions in the critical care environment, could prove to be of use in assessing the effectiveness of humor as a coping strategy, another study using a different scale to measure this variable could explicate this finding.

Second, using a larger sample size and perhaps nurses from local, regional, and national samples might give greater insight into the generalizability of the use of humor in varying milieus.

Third, this study did not discriminate between the terms humor and laughter to any great extent. It might be of use to examine "laughter" in the critical care setting in order to determine the effects of nervous verses genuine laughter on staff and patients;

i.e. are the positive effects of humor on stress reduction negated by "laughter" that might be overheard and misinterpreted.

Fourth, it appeared, from reading the narratives that the subjects had written involving humor use, that although many nurses supported and appreciated the use of humor in the critical care setting, they were uncomfortable using it; or perhaps they simply were not aware of how to use it in an appropriate manner. Devising and testing programs on how to use humor effectively, that could be incorporated into the curricula of nursing schools and within the hospital staff-development programs could have widespread application.

Fifth, the respondents in this study indicated that work-related stress often had a positive effect on them, in that they felt challenged, stimulated, and self-motivated. It could be of interest if further stress studies included an assessment of both positive and negative effects of work-related stress on critical care nurses.

Sixth, it could be of value to further delineate between the sources of stress and study the immediate and long-term effects of humor use relative to each area.

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APPENDIX A

Background Characteristics Form

ID No.____

BACKGROUND CHARACTERISTICS FORM**

A. Your present age:________years. Mean= 32.88 years. SD=4.69. Range=17.

B. Your sex: (Circle number of your choice).

1 Female 32 (94%)
2 Male 2 (6%)

C. Marital Status: (Circle number of your choice).

1 Never married 9 (26%)
2 Married/Partnered 23 (68%)
3 Divorced/Separated 2 (6%)
4 Widowed 0
5 Other (Specify) 0________________

D. Your ethnic background: (Circle number of your choice).

1 Caucasian32 (94%)
2 Black 0
3 Asian 1 (3%)
4 Hispanic 0
5 Other (Specify) 1 (3%) Eur-Asian

E. Highest level of nursing education achieved: (Circle number of your choice).

1 Diploma in nursing 6 (18%)
2 Associate degree in nursing 5 (15%)
3 Baccalaureate degree in nursing 22 (64%)
4 Masters degree in nursing 1 (3%)
5 Other (Specify) 0________________

F. Nursing experience:________year(s)________month(s). Mean=10.10 years.

G. How long have you worked in critical care nursing?________year(s)________month(s). Mean=8.14 years.

H. How many hours (per week) are you scheduled to work?________. Mean=33.2 hours.

I. Shift most often worked. Days=14 (41%) Evenings=11 (32%) Nights=8 (24%) Rotating=1 (3%)

J. What type of unit are you currently working in? (Circle number of your choice.)

1 ICU (Combined medical/surgical) 10 (30%)
2 Medical ICU 0
3 Surgical ICU 2 (6%)
4 CCU (Coronary care unit) 13 (38%)
5 ICU/CCU (Combined unit) 6 (18%)
6 Other (Specify) 3 (9%) ICU floats.

K. What is your current position? (Circle number of your choice.)

1 Staff nurse 28 (82%)
2 Assistant head nurse 2 (6%)
3 Head nurse 2 (6%)
4 Other (Specify) 2 (6%)________________

(For purposes of this paper, this form has been reduced in size.)
**Raw data are indicated to the right of each item—frequency followed by per cent.

ID No.____

L. Which of the following continuing education courses have you taken? (Place an X to indicate yes or no).

a. Death and Dying 16 No
16 Yes--------Number of courses (1-4)
Missing=2 Year of last course____

b. Stress/Stress Management 17 No
15 Yes--------Number of courses (1-3)
Missing=2 Year of last course____

c. Critical Care Courses 4 No
30 Yes--------Number of courses (1-30)
Year of last course____

d. Humor Workshops/ Conferences 30 No
2 Yes--------Number of courses (1-4)
Missing=2 Year of last course____

M. Do you have CCRN certification? (Circle number of your choice.)

1 Yes 8 (23%) Missing=1 (3%)
2 No 25 (73%)

N. Do you have ACLS certification? (Circle number of your choice.)

1 Yes 21 (62%)
2 No 12 (35%) Missing=1 (3%)

APPENDIX B

Stress-Humor Survey Form

ID No. ____

STRESS-HUMOR SURVEY FORM***

Part I Individual sources of work-related stress

1. The following categories have been identified as sources of stress in critical care areas. Indicate the greatest sources of stress for you. (Rank order by placing a 1,2,3,4, and 5 in front of each of the following categories with a 1 indicating the greatest source of stress and a 5 the least).

(1) INTERPERSONAL RELATIONSHIPS (e.g., conflicts with staff, physicians, and/or administration.)

(5) KNOWLEDGE & SKILLS (e.g., inadequate knowledge, unfamiliar equipment, inadequate continuing education.)

(3) PATIENT CARE (e.g., emergencies, death, decision making, uncooperative patients, unnecessary prolongation of life.)

(2) MANAGEMENT OF THE UNIT (e.g., staffing, scheduling, paper work, charge position, floating.)

(4) PHYSICAL WORK ENVIRONMENT (e.g., work space, noise, lack of supplies, too many people, equipment problems.)

____ OTHER (Specify) (1 response: lack of professional self-worth)

2. As a rule, which adjectives most closely describe your reaction to work-related stress. (Place an X in front of the 5 most appropriate responses.)

(19) Angry (-) **
(7) Energetic (+)
(14) Anxious (-)
(12) Self-Assertive (+)
(21) Frustrated (-)
(7) Confident (+)
(6) Depressed (-)
(13) Motivated (+)
(23) Challenged (+)
(17) Tired (-)
(10) Resourceful (+)
(3) Ineffective (-)
(12) Competent (+)
(4) Threatened (-)
(2) Other (Specify) ____
(Sarcastic -)
(Satisfaction +)

** The plus or minus indicates whether it was scored as positively or negatively-toned.

Part II Appraisal of work-related stress and the use of humor

1. How stressful do you feel your job is right now? (Circle number of your choice. Choose only one number.)

1 Not stressful (2=5.9%)
2 Slightly stressful (10=29.4%)
3 Moderately stressful (15=44.1%)
4 Highly stressful (5=14.7%)
5 Extremely stressful (2=5.9%)

(For purposes of this paper, this form has been reduced in size)

***Raw data are given in parentheses--frequency followed by per cent.

Part II Continued

2. On the average, how stressful has your job been since you started working in your present position? (Circle number of your choice. Choose only one number.)

1 Not stressful (1=2.9%)
2 Slightly stressful (6=17.6%)
3 Moderately stressful (20=58.8%)
4 Highly stressful (6=17.6%)
5 Extremely stressful (1=2.9%)

3. As a rule, how often do you use humor at work? (Circle number of your choice. Choose only one number.)

1 Daily (31=91.2%)
2 Weekly (2=5.9%)
3 Monthly (1=2.9%)
4 Less than monthly (But do use it) (0)
5 Never (0)

4. While at work, with whom do you use humor most often? (Rank order by placing a 1,2,3,4, and 5 in front of the following. A 1 indicates most often and a 5 least often.)

(3) Patients
(2) Physicians
(1) Other nurses
(5) Families of patients
(4) Other hospital employees

5. When or for what purpose do you use humor in nursing situations? (Select the three most common purposes and rank order them 1,2, and 3 with a 1 indicating your most common reason.)

(2) To establish relationships
(1) To relieve anxiety, stress, and tension
(3) To release anger, hostility, and/or aggression in a socially acceptable way
(4) As a means of escape from reality
(5) Other (Specify)________________

6. As a rule, how effective is humor in reducing the amount of work-related stress you experience? (Circle number of your choice. Choose only one number.)

1 Not effective (0)
2 Slightly effective (2=5.9%)
3 Moderately effective (11=32.4%)
4 Highly effective (18=52.9%)
5 Extremely effective (3=8.8%)

ID No. ____

Part II Continued

7. How do you usually feel after using humor during a stressful situation at work?

1 Not stressed (2=5.9%)
2 Less stressed (29=85.3%)
3 No change (3=8.8%)
4 More stressed (0)
5 Extremely stressed (0)

8. For sections A and B please use the following definitions:

Sarcastic--Humor at someone else's expense.
Playful--Could be enjoyed by everyone.
Morbid--Gallows humor, e.g., laugh-at-death.

A. Which of the following choices comes closest to describing the type(s) of humor you use at work? (Circle number of your choice. Choose only one number. Use the above definitions.)

1 Sarcastic (1=2.9%)
2 Playful (6=17.6%)
3 Morbid (0)
4 Sarcastic and Playful (8=23.5%)
5 Playful and Morbid (12=35.3%)
6 Sarcastic and Morbid (4=11.8%)
7 Other (Specify) (3=18.8%)

B. Which of the following choices comes closest to describing the type(s) of humor used most often by your co-workers? (Circle number of your choice. Choose only one number. Use the above definitions.)

1 Sarcastic (3=8.8%)
2 Playful (4=11.8%)
3 Morbid (1=2.9%)
4 Sarcastic and Playful (5=14.7%)
5 Playful and Morbid (13=38.2%)
6 Sarcastic and Morbid (5=14.7%)
7 Other (Specify) (3=18.8%)

9. Do you think that the use of humor by your co-workers helps to decrease the amount of work-related stress that you experience? (Circle number of your choice. Choose only one number.)

1 Not helpful (1=2.9%)
2 Slightly helpful (5=14.7%)
3 Moderately helpful (17=50%)
4 Highly helpful (10=29.4%)
5 Extremely helpful (1=2.9%)

10. Indicate how you would rate the overall use of humor by the staff in your unit. (Circle number of your choice. Choose only one number.)

1 No humor is used here (1=2.9%)
2 A small amount of humor is used here (7=20.6%)
3 A moderate amount of humor is used here (20=58.8%)
4 A large amount of humor is used here (4=11.8%)
5 An extreme amount of humor is used here (2=5.9%)

Part III Specific incident describing work-related stress

Take a few moments to think of a stressful situation that occurred at work, during the last two weeks, during which you used humor. In the space below briefly describe the incident and your use of humor--include the location, the titles of people involved in the incident, when it occurred, and the results.

____

(If you need more space use the back of this page.)

Answer the next questions as they apply to the incident you just described.

1. The degree of your stress BEFORE you used humor as described in the incident. (Circle number of your choice. Choose only one number.)

   1 Not stressed (1=2.9%)
   2 Slightly stressed (5=14.7%)
   3 Moderately stressed (14=41.2%)
   4 Highly stressed (7=20.6%)
   5 Extremely stressed (6=17.6%) (1 missing=2.9%)

2. The degree of your stress AFTER you used humor as described in the incident. (Circle number of your choice. Choose only one number.)

   1 Not stressed (11=32.4%)
   2 Slightly stressed (11=32.4%)
   3 moderately stressed (11=32.4%)
   4 Highly stressed
   5 Extremely stressed (1 missing =2.9%)

ID No.____

Part III Continued

3. To what degree was humor effective in decreasing the amount of stress you were experiencing? (Circle number of your choice. Choose only one number.)

   1 Not effective (1=2.9%)
   2 Slightly effective (10=29.4%)
   3 Moderately effective (16=47.1%)
   4 Highly effective (5=14.7%)
   5 Extremely effective (1=2.9%)
   (1 missing=2.9%)

4. Which word comes closest to describing the type of humor you used in the incident you just related? (Circle number of your choice. Choose only one number.)

   1 Sarcastic (Humor at someone's expense.) (6=17.6%)
   2 Playful (Could be enjoyed by everyone.) (14=41.2%)
   3 Morbid (Gallows humor--e.g., laugh-at-death.) (7=20.6%)
   4 Other (Specify) (6=17.6%) (1missing=2.9%)

5. In the incident you have just described, what was your primary role in the humorous exchange? (Circle number of your choice. Choose only one number.)

   1 Primary instigator (21=61.8%)
   2 Participant but not the instigator (9=26.5%)
   3 Observer-did not participate (2=5.9%)
   4 Other (Specify) (1=2.9%)
   (1missing=2.9%)

Thank you for your time and cooperation.

APPENDIX C

Instructions for Use of Questionnaires

THE OREGON HEALTH SCIENCES UNIVERSITY

School of Nursing
Department of Adult
Health and Illness

3181 S.W. Sam Jackson Park Road Portland, Oregon 97201 (503) 225-7839/225-7846

Instructions

Please read these instructions before you begin.

1. This packet contains two questionnaires: The Stress-Humor Survey and a Background Characteristics form. Your assistance in completing both of the questionnaires is essential to the study. Please note that some of the pages are printed on both sides.

2. Please read all the questions carefully and follow directions as written.

3. It will take approximately 20-30 minutes to complete both forms. I encourage you to complete them both at this time and return them to me before you leave. However, if you are under a time constraint, you may take the forms with you and complete them later.

4. If you elect to take the forms with you, please do not discuss the questions with anyone until you have completed and mailed them. I will supply you with a stamped, self-addressed envelope for returning the questionnaires. Please do not leave any questions blank. Attempt to answer the questions to the best of your ability; there are no right or wrong answers. If some of the responses do not exactly fit, select the option that comes closest to it. If you should need further clarification, call me at 245-5803.

5. Please turn to Part III. I would like you to write about a stressful situation that occurred at work during the last two weeks during which you used humor. If you are unable to recall an incident that meets these requirements, write about any stressful situation that occurred at work during which humor was used; but please be especially careful to note when it occurred and who was involved in the exchange.

6. For those of you who take the questionnaires home-- I will be recording your first name and the questionnaire ID number assigned to you. This is simply to assist me in collecting the completed questionnaires. The list will be kept in a locked file and subsequently destroyed as soon as data collection is completed.
A note to all participants: Your anonymity will be assured and there will be no way to connect your name to any of the data that are being collected and/or recorded.

Thank you very much.

Pam Huso

Pam Huso
245-5803

Schools of Dentistry, Medicine and Nursing
University Hospital, Doernbecher Memorial Hospital for Children, Crippled Children's Division, Dental Clinics

APPENDIX D

Nurse Informed Consent

THE OREGON HEALTH SCIENCES UNIVERSITY
School of Nursing
Department of Adult
Health and Illness
3181 S.W. Sam Jackson Park Road Portland, Oregon 97201 (503) 225-7839/225-7846

Nurse Informed Consent

I hereby agree to participate in the study titled, The Use of Humor by Critical Care Nurses in Coping with Work-Related Stress by Pamela Huso, R.N., B.S.N., under the supervision of May Rawlinson, R.N., PhD. The study is an exploration of the role of humor in the critical care setting.

My participation in the study involves answering an information form and a questionnaire regarding my perception of work-related stress and my use of humor as a coping strategy. It will take about 20-30 minutes to complete both forms. Although I may not personally benefit from this study, my participation will help to contribute to the body of knowledge regarding nurses' use of humor. Participation in this study will not involve any known risks to me.

Information obtained from this study will be strictly confidential. My name will not appear on any records and anonymity will be insured by the use of code numbers.

Pamela Huso (phone number: 245-5803) has offered to answer any questions that I might have about my participation in this study. I understand that I may refuse to participate or withdraw from this study at any time without it affecting my relationship with, or employment at this hospital.

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

_______________ Date

_______________ Subject's Signature

_______________ Witness's Signature

APPENDIX E

Examples of Paragraphs Describing Humor Use

Examples of Pargraphs Relating to Humor Use

1. One nurse in our CCU was involved with a complicated and critical patient. She was becoming so entangled with the situation that she was losing objectivity and needing help with decisions, etc. But each time she came out of the patient's room she kept marvelling to the other nurses about the "size of this patient's incisors!" In an effort to get her to "lighten up" we wrapped towels around her neck--made a "garlic necklace and gave her a crucifix (during her break). She cracked up--as did we all and when she went back to the patient, she was much more relaxed. This was done at the nurses' station, mid-shift (nights) with no other observers.

2. The first two hours of my shift had been particularly hectic--in a coronary care unit. Nothing was going right and we were getting two more admissions. It seemed as if all the nurses were running in five different directions. A co-worker grabbed a small square box, flipped open the lid and spoke into it, saying, " Scotty beam us up". We all cracked up, took time to laugh, and seemed to calm down.

3. Situation involved an ICU patient who was dying from a self-inflicted gunshot wound to the head. Night shift was short staffed and I wasn't thrilled about doing overtime, but I agreed to stay over. The charge nurse looked at me and said , "you'll only have to stay with the patient until death do you part." This comment led to more humorous remarks, but I don't remember exactly what was said--kinda tacky I know but it made me laugh and feel better about staying overtime to watch a patient die.

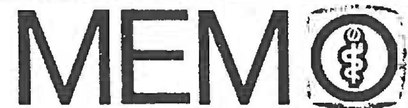
4. A new post-op radical neck patient seemed pretty tense and anxious, so while I was helping another RN reposition her in bed--at which time the patient was exposed with tubes tangled across her chest--I said that I'd better get her chest cleaned up, at the same time relating a story about my boyfriend telling me to please get my chest off my stomach--I am rather well endowed. Her nurse told me that the patient was still laughing about the story after I left the room.

5. A young medical student had spent two hours taking a history and doing a physical on a CCU patient. The patient had been very "patient" but was becoming exasperated. When I saw the situation I said, "Well, Dr. S has kept you pretty busy--around here we call him Excedrin headache # 22. The patient said, "just don't give me any Tylenol Capsules for this"(this happened after the problem with capsules with poison in them had been found in supermarkets). I replied ,"No, we have reserved all the capsules for the Dr.s every time they say, "This place is giving me a headache". Both the patient and the Dr. laughed and seemed to enjoy "having the tables turned".

APPENDIX F

Communications

THE OREGON HEALTH SCIENCES UNIVERSITY



Date: December 9, 1985

To: May M. Rawlinson, Ph.D. CDRC 2310

From: Donna Buker, Administrative Assistant
Committee on Human Research

Subject:
"The Use of Humor by Critical Care Nurses in Coping with Work Related Stress"

Your above entitled study falls under category # 5 and is considered to be exempt from the requirement for Committee on Human Research. Therefore, I have put your study into our exempt files and you will receive no further communication from our Committee concerning this study.

If the involvement of human subjects changes in this study you should contact the Committee on Human Research to find out whether or not these changes should be reviewed.

If you have any questions regarding the status of this study, please contact Donna Buker at X7887.

Sincerely,

Donna Buker, Admin. Asst.
Committee on Human Research

AN ABSTRACT OF THE THESIS OF

Pamela K. Huso

For the Master of Nursing

Title: How Critical Care Nurses Use Humor to Cope With Work-Related Stress

Approved:____
May Rawlinson, Ph.D., Thesis Advisor

A descriptive study was conducted to examine how nurses, in the critical care setting, use humor to cope with work-related stress. Four research questions were investigated:

(1) What nurse characteristics are factors in the effectiveness and frequency of humor use by critical care nurses to reduce work-related stress?

(2) What is the relationship between the amount of perceived work-related stress and the overall amount of humor used in the unit?

(3) Will those critical care nurses who appraise the greatest source of work-related stress as arising from interpersonal relationships, management of the unit, or patient care, use humor (emotion-focused coping) more frequently and find it more effective than those nurses who perceive the environment or knowledge and skills as the greatest source of stress?

(4) What is the relationship between the perceived effectiveness of humor use, in general, and its effectiveness relative to a specific incident.

Subjects were 34 registered nurses from two hospitals, who volunteered to participate. Data were collected by means of questionnaires that were developed for this study: The Background Characteristics Form and the Stress-Humor Survey. At pre-arranged times the nurses met with the investigator to complete the forms; nurses from all shifts participated.

No statistically significant relationships were found between: nurse characteristics and the effectiveness and frequency of humor use; the amount of perceived stress and the overall amount of humor used; and, effectiveness of humor use and the sources of stress.

A chi-square was used to determine whether there was a difference in the effectiveness of humor use in general, and in incident-specific situations. The results showed that in incident-specific situations, nurses rated the use of humor as less effective in reducing stress.

In this study, sources of work-related stress were also examined by rank-ordering and nurses' responses to this stress were determined by their selection of positively and negatively-toned descriptors. Lazarus's model of stress, appraisal and coping was used as the theoretical framework.

For the most part, the use of humor by critical care nurses was seen as an effective coping strategy, in that they felt less stressed after participating in a humorous exchange. Generalizability of this study may be limited by the use of previously untested data collection instruments and the small sample size. Recommendations for further research were made.