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Relationships among perceptions of patient privacy, powerlessness, and subjective sleep characteristics in hospitalized adults with coronary heart disease

Ruehl, Polly Banks, M.S.

The University of Arizona, 1988
RELATIONSHIPS AMONG PERCEPTIONS OF PATIENT PRIVACY, POWERLESSNESS, AND SUBJECTIVE SLEEP CHARACTERISTICS IN HOSPITALIZED ADULTS WITH CORONARY HEART DISEASE

by

Polly Banks Ruehl

A Thesis Submitted to the Faculty of the COLLEGE OF NURSING In Partial Fulfillment of the Requirements For the Degree of MASTERS OF SCIENCE In the Graduate College THE UNIVERSITY OF ARIZONA 1988
STATEMENT BY THE AUTHOR

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APPROVAL BY THESIS DIRECTOR

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12-8-88 Date
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ABSTRACT

The purpose of this study was to describe the relationships among perceptions of privacy, powerlessness, and subjective sleep characteristics in hospitalized adults with coronary heart disease. Thirty subjects, 48 to 92 years old who were hospitalized for suspected or confirmed coronary heart disease, completed three questionnaires. Negative relationships were found between patient privacy and powerlessness \((r = -0.44)\) and between powerlessness and the subjective sleep characteristics of sleep effectiveness \((r = -0.30)\). Feelings of powerlessness were negatively related to total number of days of \((r = -0.50)\) and number of days in the Coronary Care Unit (CCU) \((r = -0.41)\). The number of days in the CCU was positively related to sleep disturbance \((r = 0.30)\). Age was negatively related to patient privacy \((r = -0.31)\) but positively related to powerlessness \((r = 0.33)\) and sleep supplementation \((r = 0.35)\). A better understanding of the hospital environment enhances the planning of nursing care for hospitalized patients.
CHAPTER I

Introduction

Hospitalization is often a new experience for most people in a social system with set rules that must be followed in order to receive health care. Patients sometimes complain of adverse effects of hospitalization such as loss of privacy, powerlessness, and poor quality of sleep (Roberts, 1986; Hilton, 1976). To appropriately describe the potential adverse effects of hospitalization the relationships among privacy, powerlessness, and subjective sleep characteristics need to be explored and described.

Problem

For some hospitalized patients, sleep is generally disturbed and inefficient (Verran, Duffy & Snyder-Halpern, 1988; Lindell, 1988). Environmental characteristics may alter the patients' subjective sleep characteristics (Verran et al., 1988). Thus, the relationships among hospitalized patients' subjective sleep characteristics and specific environmental characteristics need to be examined (Verran et al., 1988).

Admission to the hospital for the person experiencing symptoms of a myocardial infarction places the person in
an environment with potential physiological, psychological, and environmental stressors (Hilton, 1976; Fontaine, 1987; Goodemote, 1985). The environmental characteristics of lack of patient privacy and powerlessness can be identified as potential environmental stressors (Larson & Bell, 1988; Hilton, 1976; Ballard, 1981; Lindquist, 1986; Shillinger, 1983; Smith, 1985). Environmental stressors are frequently reported by patients as sleep-disturbing factors (Hilton, 1976).

When rapid eye movement (REM) sleep is reduced, the time of sleep recovery has been reported to involve prolonged REM sleep, also called REM rebound (Hilton, 1976; Fontaine, 1987; Goodemote, 1985). REM rebound sleep is associated with the exacerbation of angina and arrhythmias in patients susceptible to these conditions (Hemenway, 1980; Brewer, 1985).

Dlin, Rosen, Dickstein, Lyons, and Fischer (1971) suggested that sleep deprivation in the intensive care unit (ICU) does exist and can be substantially eliminated. Dlin et al. (1971) also believe that in the ICU environmental privacy is almost impossible and that the patient is powerless when the hospital staff has absolute authority. Subjects in the ICU were preferred for this study. However, access to the ICU was discouraged until
less acute subjects were studied to provide more knowledge of the problem to support the need to study the ICU environment. The major concepts investigated in this study were patient privacy, powerlessness, and subjective sleep characteristics.

**Conceptual Definitions**

Patient privacy is the dynamic regulatory process of a patient's selective control of his interactions with others to maintain the desired amount of interaction with others (Altman, 1975; Roberts, 1986; Edney, 1974; Hayter, 1981).

Powerlessness is the perception of the lack of personal control of specific events or situations as well as a measure of the individual's expectancies for control (Johnson, 1967; Seeman & Evans, 1962).

Subjective sleep characteristics are the individual's estimates of sleep that describe the disturbance, effectiveness, and supplementation of sleep (Snyder-Halpern & Verran, 1987; Verran et al., 1988).

Sleep disturbance relates to sleep fragmentation and delay
that includes the characteristics of wake after sleep onset, sleep latency, soundness of sleep, quality of disturbance, mid-sleep awakening, quality of latency, and movement during sleep (Verran et al., 1988).

Sleep effectiveness reflects the length and depth of sleep that includes the characteristics of total sleep period, total sleep time, rest upon awakening, subjective quality of sleep, and sleep sufficiency evaluation (Verran et al., 1988).

Sleep supplementation is sleep other than during the primary sleep time. Supplementation sleep factors include the characteristics of daytime sleep, morning sleep, evening sleep, and awake after final arousal (Verran et al., 1988).

Purpose

The purpose of this study was to describe the relationships among feelings of patient privacy, powerlessness, and subjective sleep characteristics in those hospitalized with coronary heart disease. Some patients complain of loss of privacy, powerlessness, and poor quality of sleep during hospitalization (Roberts,
1986; Hilton, 1976, Dlin et al., 1971). A better understanding of the relationships among patient privacy, powerlessness, and subjective sleep characteristics, is necessary before studies can be conducted which are aimed at altering the effects of the environment on hospitalized patients.

**Research Questions**

1. What is the relationship between patient privacy and powerlessness?

2. What is the relationship between patient privacy and the subjective sleep characteristics in relation to disturbance, effectiveness, and supplementation?

3. What is the relationship between powerlessness and the subjective sleep characteristics in relation to disturbance, effectiveness, and supplementation?

**Significance**

A better understanding of the effects of the environment on hospitalized patients is needed to improve the quality of sleep among patients (Dlin et al., 1971). Therefore, the relationships among patient privacy,
powerlessness, and subjective sleep characteristics need to be described to provide a better understanding of the hospital environment and the environmental effects on patients diagnosed with suspected coronary heart disease.

With more knowledge of the hospital environment nurses should be able to improve the care for the hospitalized patient. The plan of care could be improved by increasing nurses' abilities to anticipate patients' needs and effectively prioritizing those needs. The improved plan of care should enable nurses to provide patients with better nursing care resulting in more desirable patient outcomes.

This study is a beginning in building a conceptual framework to generate nursing research. The study as designed will not permit the results to be generalizable. However, the study may generate replications of the study with larger and diverse samples. With further study a middle range theory might be developed to explain the phenomena of privacy, power, and sleep and add to the body of nursing knowledge.

Summary

Patients with coronary heart disease experiencing poor quality sleep are susceptible to the negative
physiological effects of recovery sleep such as angina and arrhythmias. Quality of sleep has been suggested to be negatively affected by environmental stressors such as lack of patient privacy and powerlessness. The purpose of this study was to describe the relationships among the concepts of patient privacy, powerlessness, and subjective sleep characteristics in hospitalized adults with coronary heart disease.

The research questions focused on the direction and strength of the relationships between patient privacy and powerlessness, patient privacy and subjective sleep characteristics, and powerlessness and subjective sleep characteristics. This study is significant to nursing and society because understanding the environment of the hospital may improve patient outcomes by providing increased knowledge for better nursing care planning and improved patient care.
CHAPTER II

Review of the Literature

The purpose of this chapter is to report relevant literature and to present conceptual and operational definitions of the constructs, concepts, and operational indicators germane to this study (Figure 1). The first construct to be introduced is privacy with the concept patient privacy. Power is the second construct introduced followed by the concept powerlessness. The third construct is sleep followed by the concept subjective sleep characteristics. This chapter also includes discussion of the proposed relationships as evident in the literature.

Privacy

Privacy is a process which attempts to control levels of input and output from others (Altman, 1975). Privacy allows for regulation of interaction with others by an "interpersonal boundary-control process" (Altman, 1975). Selective control is used in the dynamic regulatory process by an individual or group for achieving a desired self-boundary (Altman, 1975). The desired level of privacy changes from situation to situation and is based upon the patient's "past experience, immediate
Figure 1. Privacy-Power-Sleep Model

PPQ - Patient Privacy Questionnaire
POQ - Powerful Others Questionnaire
VSHD = Verran/Snyder-Halpern Sleep Disturbance Subscale
VSHE = Verran/Snyder-Halpern Sleep Effectiveness Subscale
VSHS = Verran/Snyder-Halpern Sleep Supplementation Subscale
possibilities, and general personal style" (Altman, 1975).

Patient Privacy

Patient privacy is the dynamic regulatory process of the patient's selective control of his/her interactions with others to maintain desired privacy (Roberts, 1986; Edney, 1974; Hayter, 1981). The interaction of distance and closeness between the patient and others is essential for patient privacy. The lack of congruence in distancing can result in patient dissatisfaction; and, patient satisfaction can occur when some distancing is allowed (Schuster 1976). In the intensive care unit, patient privacy is often interrupted and the patient is usually powerless to control the environment (Dlin et al., 1971).

According to Altman (1975), when the desired level of privacy (an individual's personal desired amount of interaction with others) is equal to the achieved level of privacy (the actual amount of interaction with others) a balanced or optimal state of privacy exists. However, an imbalanced or nonoptimal state of privacy occurs when the desired privacy is either more or less than the achieved privacy (Altman, 1975). When an imbalance of desired and achieved privacy exists the individual attempts to adjust to the nonoptimal privacy state by changing the desired
level of privacy or employing control mechanisms to change the achieved level of privacy. The adjustment process has physical, physiological, and psychological costs which are often manifested as illness, stress, and anxiety (Altman, 1975).

Based on interviews with 21 recently hospitalized adults, Schuster (1976) described the degree of mobility, level of consciousness and awareness, specific character of patient-to-patient relationships, and perception of role as four major variables which influence patient privacy. The degree of mobility was defined as the patient's ability to move and use his or her body parts. The level of consciousness and awareness was defined as the level of sensory perception. Patient-to-patient relationships were described as promoting a sense of camaraderie with other patients when events were shared, resulting in a decreased interpersonal distance and maintenance of a degree of reserve. Perception of role was defined as how the patient perceived his role in relation to his interrelationships with other patients, his previous personal experiences, and his knowledge and understanding of his illness (Schuster, 1976).

Holahan (1982) described two psychological functions of privacy. Managing social interaction by interaction
management, information management, and maintaining group order is one important function of privacy. The second function is to establish a sense of personal identity through self-identity, self-evaluation, and personal autonomy (Holahan, 1982).

Westin (1970) described emotional release as a function of privacy. Emotional release permits relaxation of social roles by allowing deviations from rules and customs. An individual's environmental setting, however, affects the degree of emotional release by influencing the degree of privacy (Westin, 1970).

Roosa (1982) interviewed 60 nursing home residents regarding their areas of concern related to privacy. Unfortunately, little is reported on the research design and quantification of observations. However, 28, or nearly half, of the residents identified emotional release as a benefit of privacy. Thus, privacy allowed the residents time for rest promoting stress reduction (Roosa, 1982).

**Patient Privacy Questionnaire**

The Patient Privacy Questionnaire (PPQ) measures a patient's feelings of privacy (Gerber, 1986) and was used as the operational indicator for the concept patient
privacy. The PPQ, in Likert-type format, has been revised from 13 to 10 statements reflecting feelings of privacy to increase the reliability of the scale. The subject responds by circling one of the five options from strongly agree to strongly disagree.

**Power**

Power is the ability to persuade (control) others to achieve certain goals (Booth, 1983). Power is acquired from the use of authority, expertise, or charisma (Booth, 1983). Power exists in all relationships and is strengthened by access to information and personal autonomy (Booth, 1983).

**Powerlessness**

Powerlessness, the lack of power, is a perception of a lack of personal control of specific events or situations as well as a measure of the individual's expectancies for control (Johnson, 1967; Seeman & Evans, 1962). In the critical care setting a patient usually does not participate in the decision making process concerning which room he is assigned, his activity level, his diet, or how often his vital signs are taken. Some patients may feel guilty over the powerlessness, while
other patients may feel relieved to relinquish the power (Roberts, 1986).

Rotter (1975) suggested that the concept of control of reinforcement is related to the feeling of powerlessness based on Seeman and Evans' (1962) work with alienation. He further stated that reinforcement is a perception of an event resulting from either internal control, the belief that self-behavior controls events, or external control, the belief that forces outside oneself control events (Rotter, 1975). Developed from social learning theory, internal versus external control of reinforcement was studied as a variable to predict how reinforcements change expectancies (Rotter, 1975). Rotter (1975) developed the Internal-External Locus of Control (I-E) Scale to measure internal-external locus of control.

Powerlessness has been defined by Seeman and Evans (1962) as a measure of the individual's expectancies for control. In review of the definitions of reinforcement and powerlessness, reinforcement results from the perception of internal or external control (Rotter, 1975) that changes expectancies which determine the perception of powerlessness (Seeman & Evans, 1962).

Social learning theory (Rotter, 1975) consists of four variables (behaviors, expectancies, reinforcements,
and psychological situations). The theory purports that expectancy influences an individual's behavior in any given psychological situation to control reinforcement dependent on the perceived value of the reinforcement and the amount of experience the individual has in the given and similar situations. Generalized expectancy decreases with more experience in the situation and increases as the situation is more uncommon or uncertain (Rotter, 1975).

Levenson (1974) revised Rotter's I-E Scale by developing three new Likert-type scales and by separating the concept of external locus of control into powerful others and chance locus of control. The Powerful Others Locus of Control Scale measures the belief in the power of other people. Levenson (1974) conducted one study of 96 adults and a second study of 329 college-aged adults using the three newly developed tools to determine the validity of the separated Internal (I), Powerful Others (P), and Chance (C) Locus of Control Scales. The P Scale was found to have internal consistency reliability with a coefficient alpha of .77 and construct validity based on factor analysis (Levenson, 1974).

Gerber (1984) conducted a causal modeling correlational study of the effects of perceived territorial control on state anxiety and satisfaction with
care in 80 hospitalized adults. One of the variables studied was powerful others locus of control. Powerful others locus of control was defined as "expectancy of control by powerful others" (Gerber, 1984). Gerber (1984) operationalized the powerful others locus of control by adapting Levenson's Powerful Others Locus of Control Scale by deletion of one item which, on face validity, was not useful when studying hospitalized adults. Internal consistency reliability for the adapted Powerful Others Locus of Control Scale was .74 (Gerber, 1987). The powerful others locus of control variable was found to directly and positively affect state anxiety. Therefore, Gerber (1984) suggested that as the expectancy that powerful others will be in control increases, the level of anxiety will also increase.

Dennis (1987) implemented and later replicated a descriptive study with a sample of 70 medical-surgical adult patients to identify behavioral, cognitive, and decisional patient activities that promote a sense of control during hospitalization. Seventy medical-surgical patients were given the newly developed Client Control Q Set (CCQS) to "determine the relative importance patients attach to controlling hospital events." Internal consistency reliability for the CCQS was reported to be
The major data set analysis reflected that "knowing what is expected" was important for "getting well/going home" and "making the stay more pleasant." Environmental and interpersonal issues were also important for "making the stay more pleasant." The replication data reflected that "behavioral enactment," "some decisional control," and "getting others to meet one's needs" were important for "getting well/going home." "Knowing expectations, schedules, and routines," and "behavioral independence and personal integrity" were important in "making the stay more pleasant" (Dennis, 1987).

Raps, Peterson, Jonas, and Seligman (1982) conducted a study of 48 inpatients and 24 outpatients to test cognitive tasks and depression secondary to induced feelings of helplessness and length of hospitalization. Although the reliability and validity of the operational indicators, Jastak Vocabulary Test and the Beck Depression Inventory, were not reported, the data showed that helplessness increased with hospitalization as reflected by the worsening task performance with increased length of hospitalization. The authors concluded that hospitalization promotes learned helplessness and that exposure to inescapable noise in hospitalized patients increased their susceptibility to learned helplessness.
(Raps et al., 1982).

Seeman and Evans (1962) conducted a study with 10 tuberculosis hospitals using a sample of 877 Caucasian men. The Alienation Scale was used to measure powerlessness, a measure of the individual's expectancies for control. They hypothesized that powerlessness and personal control would influence learning about tuberculosis; and, that high alienation would be conducive to poor learning. The investigators concluded that an individual's performance was relative to his expectancies for control of events (Seeman & Evans, 1962).

**Patient-Others Questionnaire**

The Patient-Others Questionnaire (POQ) is intended to index powerlessness in relation to the powerful locus of control (Gerber, 1984) and was used to operationalize the concept powerlessness. The POQ uses a Likert-type format and was revised from 7 to 6 statements to improve the reliability of the scale. The POQ reflects a patient's perception of the power of others in reflection of his or her power while in a hospital. The subject responds by circling one of the six options from agree strongly to disagree strongly.
Sleep

Sleep has been identified as a basic human need (Fontaine, 1987) that maintains or rebuilds physical and psychological function (Ballard, 1981). Sleep is a reversible state that is cyclical in nature and characterized by a decrease in the levels of cortical vigilance (Fontaine, 1987). The sleep cycle consists of rapid eye movement (REM) sleep, non-rapid eye movement (NREM) sleep, and wakefulness (Orem & Barnes, 1980).

Sleep begins in stage one and progresses through stages two, three, and four before retracing to stages three and two (Chuman, 1983; Carrieri, Lindsey & West, 1986). REM sleep then follows stage two. The cycle continues to repeat beginning with stage two and progressing to stage three and four then back to three and two to end in REM sleep. The REM to REM cycle lasts approximately 90 minutes and continually cycles approximately four to five times throughout sleep until awakened (Chuman, 1983; Carrieri et al., 1986).

When the circadian rhythm is disrupted by interruption of the sleep-wake cycle the cortisol rhythm may also be affected. Thus, the cortisol level may be higher during the sleep time. High cortisol levels may interfere with sleep by shunting tryptophan away from the
5-hydroxytryptamine, serotonin, forming pathway depleting serotonin. Serotonin is a neurotransmitter responsible for sleep onset and maintenance of stages three and four. Therefore, if serotonin concentration is depleted by high cortisol levels sleep onset and NREM sleep will be disturbed. And, NREM sleep is needed to prime the brain for REM; thus, REM sleep will also be disturbed by high cortisol levels (Carrieri, 1986; Chuman, 1983).

When REM sleep is interrupted causing REM deprivation, a rebound effect called "REM rebound" which results in a higher percentage of the total sleep time in REM sleep occurs (Carrieri et al., 1986; Chuman, 1983). During REM sleep cerebral blood flow increases, oxygen consumption elevates, and variability in blood pressure, heart and respiratory rate increases (Chuman, 1983). Prolonged REM sleep due to REM rebound can have devastating negative effects on the patient with an already compromised cardiovascular status (Hilton, 1976; Fontaine, 1987; Goodemote, 1985). Thus, patients with coronary artery disease may not be able to tolerate the increased demands on the heart from the increased heart rate and variability in blood pressure (Hemenway, 1980; Brewer, 1985).

When sleep is resumed after an interruption during
any time of the cycle sleep begins again at stage one (Chuman, 1983; Carrieri et al., 1986). During the first half of the night NREM is most prevalent; and, during the second half of the night REM sleep is prevalent. Thus, interruptions during the first half of the night manifest NREM deprivation; and, interruptions during the second half of the night manifest REM deprivation (Chuman, 1983; Carrieri et al., 1986).

Protein synthesis occurs during REM sleep promoting the deposition of protein in nerve cells which may facilitate memory storage, memory consolidation, and learning (Carrieri et al., 1986; Chuman, 1983; Ganong, 1986). Hyperactivity, emotional lability, agitation, mood disruption, and decreased impulse control have been reported with REM deprivation (Chuman, 1983).

Subjective Sleep Characteristics

Subjective sleep characteristics are the subjective countenances that describe the disturbance, effectiveness, and supplementation of sleep (Snyder-Halpern & Verran, 1987; Verran et al., 1988). Sleep disturbance relates to sleep fragmentation and delay that includes the characteristics of wake after sleep onset (WASO), sleep latency (SL), soundness of sleep (SS), quality of
disturbance (QD), mid-sleep awakening (MSA), quality of latency (QL), and movement during sleep (MDS) (Snyder-Halpern & Verran, 1987; Verran et al., 1988).

Sleep effectiveness reflects the length and depth of sleep that includes the characteristics of total sleep period (TSP), total sleep time (TST), rest upon awakening (RUA), subjective quality of sleep (SQS), and sleep sufficiency evaluation (SSE). The characteristic of total sleep period (TSP) is considered a linear composite of the effectiveness of sleep; however, for the purposes of this study the TSP characteristic will be excluded.

Sleep supplementation includes the characteristics of daytime sleep (DTS), morning sleep (AMS), evening sleep (PMS), and awake after final arousal (WAFA) (Snyder-Halpern & Verran, 1987; Verran et al., 1988). Definitions of the sleep characteristics (disturbance, effectiveness, and supplementation) are presented in Table 1.

Richards and Bairsfather (1988) studied 10 medical ICU patients diagnosed with cardiovascular disease. Polysomnographic data were recorded up to three nights on each patient and compared to normal subjects who slept in a laboratory. The ICU patients were found to spend more time in stage one sleep and latency of sleep onset was noted. The researchers suggested that the open design of
Table 1  
Definitions of the Subjective Sleep Characteristics of Disturbance, Effectiveness, and Supplementation

<table>
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<tr>
<td><strong>Disturbance</strong></td>
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<tr>
<td>Wake after sleep onset (WASO): estimated amount of time spent awake during the total sleep period.</td>
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<tr>
<td>Sleep latency (SL): estimated amount of time from settling down to sleep until falling asleep.</td>
</tr>
<tr>
<td>Soundness of sleep (SS): subjective estimate of the depth of sleep.</td>
</tr>
<tr>
<td>Quality of disturbance (QD): subjective estimate of sleep disturbance due to awakenings.</td>
</tr>
<tr>
<td>Mid-sleep awakening (MSA): estimated number of awakenings during the sleep period.</td>
</tr>
<tr>
<td>Quality of latency (QL): subjective estimate of difficulty in going to sleep.</td>
</tr>
<tr>
<td>Movement during sleep (MDS): subjective estimate of the amount of movement during sleep.</td>
</tr>
<tr>
<td><strong>Effectiveness</strong></td>
</tr>
<tr>
<td>Total sleep period (TSP): estimated amount of total time in minutes from settling down for sleep to awakening in the morning.</td>
</tr>
<tr>
<td>Total sleep time (TST): subjective estimate of time in minutes spent in actual sleep.</td>
</tr>
<tr>
<td>Rest upon awakening (RUA): subjective estimate of how rested the person is upon awakening.</td>
</tr>
<tr>
<td>Subjective quality of sleep (SQS): individual estimate of sleep along dimensions of satisfaction, quality, and disturbance in sleep.</td>
</tr>
<tr>
<td>Sleep sufficiency evaluation (SSE): estimate of adequacy of amount of sleep.</td>
</tr>
<tr>
<td><strong>Supplementation</strong></td>
</tr>
<tr>
<td>Daytime sleep (DTS): estimate of time asleep other than primary sleep period.</td>
</tr>
<tr>
<td>Morning sleep (AMS): estimate of the amount of time asleep in the morning after initial awakening.</td>
</tr>
<tr>
<td>Evening sleep (PMS): estimate of the amount of sleep in the evening before settling down for primary sleep.</td>
</tr>
<tr>
<td>Awake after final arousal (WAFA): estimate of time in bed from initial morning arousal to final awakening.</td>
</tr>
</tbody>
</table>

the ICU is a factor that negatively affects patient sleep which can lead to physiological and psychological disturbances related to sleep deprivation.

For a 24 hour period, Dlin et al. (1971) observed six patients in an ICU and documented the time, nature, source, and duration of each patient interruption along with the patient's response to the interruption. The interruption time during the 8 hour night was 10 to 20 percent of the time. Although interrater reliability was not reported and the sample was not fully identified, the researchers concluded that there is intrusion of patient privacy in the ICU environment; and, volitional control is deprived. Therefore, the quality of sleep is inferior (Dlin et al., 1971).

Broughton and Baron (1978) studied 12 post-myocardial infarction patients with polygraph recordings each night from admission to 13 days post infarction. The patients were observed while in the ICU and after transfer to the regular hospital ward. The researchers reported that sleep effectiveness was markedly reduced in the ICU patients when compared to 12 control subjects observed in the laboratory. The quality of sleep improved over time but without an abrupt change when the patients were transferred to the ward. The researchers suggested that
the stress of the acute myocardial infarction and not the environment is the major cause of sleep disturbance. However, they go on to say that the environment may modulate the resolution of the initial stressor (Broughton & Baron, 1978).

Lindell (1988) investigated sleep characteristics of 30 subjects in the CCU and compared the results with data from groups of healthy nonhospitalized subjects (n = 144) and subjects hospitalized on general medical-surgical units (n = 76). The CCU subjects' sleep was found to be disturbed and ineffective. However, the sleep characteristics of the subjects in CCU did not significantly differ from the subjects hospitalized in general medical-surgical units. The CCU subjects' sleep characteristics did, however, differ significantly from the sleep characteristics of the healthy nonhospitalized subjects.

Verran, Duffy, and Snyder-Halpern (1988) studied the subjective sleep characteristics in relation to disturbance, effectiveness, and supplementation of 151 subjects hospitalized on medical-surgical units in three acute care hospitals. The sleep characteristics of the subjects from each of the hospitals were compared to determine the differences among the groups. The sleep
disturbance and sleep supplementation measured for each of the groups did not significantly differ among the groups. The sleep effectiveness did, however, significantly differ among the groups. The researchers suggested that the differences in sleep effectiveness among the groups may be due to individual differences rather than differences in the hospital settings. Thus, the researchers concluded that sleep is disturbed and ineffective in hospitalized adults and recommended that specific hospital environmental characteristics and individual characteristic be studied to determine their relationships to the sleep characteristics.

Verran/Snyder-Halpern Sleep Scale

The Verran/Snyder-Halpern (VSH) Sleep Scale (Snyder-Halpern & Verran, 1987; Verran et al., 1988) was used to measure the concept subjective sleep characteristics. The VSH Sleep Scale is a visual analogue scale that measures the subjective sleep characteristics in relation to the variables of sleep disturbances, sleep effectiveness, and sleep supplementation (Snyder-Halpern & Verran, 1987; Verran et al., 1988). The VSH Sleep Scale consists of the three subscales VSHD, VSHE, and VSHS. The subscale VSHD measures sleep disturbance; VSHE measures sleep
effectiveness; and VSHS measures sleep suppletionation (Snyder-Halpern & Verran, 1987; Verran et al., 1988).

**Conceptual Links**

**Patient Privacy and Powerlessness**

The loss of patient privacy may promote feelings of powerlessness, the perception of lack of control or influence of a situation or outcome (Kim, McFarland & McLane, 1987; Robertson, 1986). However, Robertson (1986) suggested that powerlessness may decrease the patient's level of interest and desire to protect his privacy.

Westin (1970) described personal autonomy as a basic function of privacy. Personal autonomy is an individual's sense of integrity and individuality with which the individual is able to avoid powerlessness, or manipulation by others, by the use of power to achieve desired privacy (Westin, 1970). "Privacy is power" over self that determines the amount of control of separating self from others (Proshansky et al., 1976).

Rawnsley (1980) refers to privacy as a "palliative and a restorative" resource which allows the individual to escape from social stress and gain strength to defend against social pressures. She stated that the "accessibility" of privacy is the function of the power of
the individual (Rawnsley, 1980). Therefore, the more information a patient gives to the professional at the hospital the more powerlessness the patient and the greater the power of the professional resulting in a greater threat to patient privacy (Curtin, 1986). Schuster (1976) describes the degree of mobility as a major variable which influences patient privacy. Impaired mobility may diminish the patient's ability to control his personal boundary and may promote feelings of powerlessness by interfering with his ability to perform simple tasks (Schuster, 1976).

**Patient Privacy and Subjective Sleep Characteristics**

Studies directly examining the conceptual relationship between patient privacy and subjective sleep characteristics were not discovered. However, Walker (1972) suggested that patient privacy may promote sleep by decreasing sleep disturbance. Walker (1972) hypothesized that increased nurse-patient interaction would decrease the amount of time for patient rest and sleep. Four post cardiotomy patients were studied for two days using data from cardiac monitoring devices and investigator observations. She concluded that with constant
interruptions patients cannot sleep and suggested that nurses need to "give attention to external stimuli" by providing patient privacy (Walker, 1972).

Additionally, the relationship between patient privacy and subjective sleep characteristics may be deduced considering present knowledge of level of consciousness and awareness. One of the functions of sleep is physiological and psychological restoration which promotes consciousness and awareness (Carrieri et al., 1986; Chuman, 1983; Ganong, 1986). Poor quality of sleep is associated with sensory/perception deprivation which can lead to a decreased level of consciousness and awareness which negatively influences patient privacy (Kim et al., 1987; Schuster, 1976). Schuster (1976) suggested that one's level of consciousness and awareness influences patient privacy by diminishing one's ability to adjust and adapt to the environment and allow sensory input.

Powerlessness and Subjective Sleep Characteristics

The literature review failed to discover studies directly describing the relationship between powerlessness and subjective sleep characteristics. Therefore, indirectly through the concept of stress the relationship
between powerlessness and subjective sleep characteristics may exist. This questionable relationship is identified by a question mark in the model.

Sutterley (1979) stated that powerlessness may lead to stress. And, Hilton, (1976) identified stress as a factor that negatively affects sleep and sleep quality. Illness, stress, and anxiety have been identified as factors that negatively affect subjective sleep characteristics (Hilton, 1976). For this reason, the possible relationship between patient privacy and subjective sleep characteristics was thought to be worthy of investigation.

Summary

The literature is supportive of a negative relationship between the concepts of patient privacy and powerlessness and a positive relationship between patient privacy and subjective sleep characteristics. The relationship between powerlessness and subjective sleep characteristics remains unclear. The hospital environment increases a patient's susceptibility to powerlessness and an imbalanced state of patient privacy which is likely to interfere with subjective sleep characteristics. Dlin et al. (1971) suggested that lack of patient privacy,
powerlessness, and poor quality sleep exists in the intensive care environment and that the hospital environment needs to be understood to help prevent poor quality sleep. Verran et al. (1988) recommended that the relationships among specific hospital environmental characteristics and sleep characteristics of hospitalized patients need to be examined. Thus, this study was designed to study the relationships among the variables of patient privacy, powerlessness, and subjective sleep characteristics.
CHAPTER III

Methodology

The research design, sample, setting, data collection plan, and data analysis plan are described in this chapter. The protection of human subjects is also presented.

Research Design

A descriptive correlational design was used to examine the relationships among patient privacy, powerlessness, and subjective sleep characteristics in hospitalized adults. A descriptive correlational design provided a structural framework for describing the interrelationships among the variables within a short period of time. The purpose of the study was to describe the relationships among patient privacy, powerlessness, and subjective sleep characteristics.

Setting and Sample

The target population was adults recently admitted to the hospital with suspected or confirmed coronary heart disease. A convenience sample of 30 subjects was obtained at a southwestern general hospital from patients in a Step-Down Coronary Care Telemetry Ward. Subjects in
both private and semi-private rooms were included in the study. The type of room was recorded for each of the subjects and included in the statistical analysis of the study.

Criteria for admission to the study included the following:
1) the subjects were over the age of 18 to qualify as an adult for inclusion in the study;
2) the subjects' physical and emotional conditions were relatively stable without a life-threatening medical episode in the 24 hours prior to data collection to attempt to control for extraneous variables which may increase stress;
3) the subjects must have been able to read and speak English to facilitate communication between the subjects and the researcher for directions and explanations for the study as well as to understand the study instruments written in English;
4) the subject must have been in the Step-Down Coronary Care Telemetry Ward for at least two nights of sleep to allow for at least one adaptation night of sleep prior to the night of sleep studied; and,
5) the medical diagnosis was limited to suspected or confirmed coronary artery disease to control for the
internal environmental influences such as the patient's response to surgery, infection, impaired mobility, and pain.

Subjects recently receiving pain medications were avoided; thus, mood altering drug effects should not have effected the findings of this study. The subject selection was not limited by ethnicity, religion, or sex in order to promote a more heterogeneous and more representative sample.

The number of days of hospitalization (ADMD) and the number of days in the Coronary Care Unit (CCUD) were recorded for each subject and included in the data analysis. The room location in reference to the nurses station was also noted. Those rooms near the nurses' station were probably exposed to a higher noise level.

**Data Collection Plan**

Three short (6- to 15- items) paper and pencil questionnaires were used to measure the concepts of patient privacy, powerlessness, and subjective sleep characteristics. Permission to use the questionnaires was obtained from their authors (Appendix A).

Subjects were approached by the researcher in the subject's assigned hospital room after at least two nights
of sleep in the Step-Down Coronary Care Telemetry Ward. The researcher administered the questionnaires to the subjects after introducing herself and explaining the study in respect to purpose, method, risks, and benefits. Directions for completing the questionnaires were explained by the researcher and the subjects received written instructions on the three questionnaires.

Demographic data were obtained by the researcher by chart review after the subject consented to participate in the study and his or her doctor had approved the subject's participation (Appendix B). The subjects were told that they could complete the questionnaires at their convenience but that the sleep questionnaire needed to be completed within two hours of awakening to measure the previous night's sleep. A manila envelope was made available for each subject in which to place the questionnaires until collected by the researcher the following day. However, each of the subjects indicated that they would be able to complete the questionnaires the morning of distribution. Many of the subjects stated that they would complete the questionnaires within the hour because they were to be discharged later in the day and would not be available the following day. Therefore, the questionnaires remained at the patient's bedside until
retrieved by the investigator, within two hours of distribution.

Each subject received a code number written on the set of questionnaires and the demographic form. The subjects were instructed to not write their name on the forms to further protect their anonymity. The subject's name did not appear on any of the data collection forms.

The sequence of order of the questionnaires was randomized so that not all questionnaires were administered in the same order. Altered sequencing of questionnaires was used to protect against any systematic bias that could occur from the ordering of the three questionnaires.

Instrumentation

The concepts patient privacy, powerlessness, and subjective sleep characteristics were measured by three paper and pencil questionnaires. The Patient Privacy Questionnaire (Gerber, 1986) measured patient privacy; the Patient-Others Questionnaire (Gerber, 1984) measured powerlessness; and the Verran/Snyder-Halpern Sleep Scale (Verran et al., 1988) measured subjective sleep characteristics. Permission to use the questionnaires was obtained from their authors (Appendix A).
The PPQ was developed by Gerber (1986) as the "Feelings of Privacy" scale. The questionnaire consisted of 13 questions in a Likert-type format. The PPQ had a demonstrated internal consistency reliability alpha coefficient of 0.71. The content validity of the PPQ was determined by a panel of experts (Gerber, 1986). Based on item analyses of the PPQ, several items were rewritten for this study to improve clarity and three items were omitted to increase item-to-item correlations and item-to-total correlations. Therefore, the alpha reliability was reestimated in this study.

The original Powerful Others Locus of Control Scale was developed and tested extensively by Levenson (1974) and reflected Rotter's (1975) conceptualization of internal-external locus of control. Gerber's (1984) adapted Patient-Others Questionnaire (POQ) was used to measure the concept powerlessness. The POQ had an internal consistency reliability of alpha 0.83 in an earlier study (Gerber, 1987). Content validity has been determined by a panel of experts (Gerber, 1984). The POQ was adapted from Levenson's scale by omission of two questions and restatement of the six remaining items to more effectively reflect the conditions of hospitalized patients. The POQ used in this study consisted of six
questions in a Likert-type format. The alpha reliability for the revised scale was reestimated in this study.

The concept subjective sleep characteristics was operationalized by use of the VSH Sleep Scale. The VSH Sleep Scale measured subjective sleep characteristics with a 15 item visual analogue scale (Snyder-Halpern & Verran, 1987, Verran et al., 1988). The VSH Sleep Scale had been found to be internally consistent with an alpha reliability of 0.82 to 0.87 for the Disturbance Subscale, 0.74 to 0.89 for the Effectiveness scale, and 0.73 to 0.84 for the Supplementation Subscale (Verran et al., 1988). The construct validity had been demonstrated with factor analysis (Snyder-Halpern & Verran, 1987; Verran et al., 1988).

**Protection of Human Subjects**

A proposal for this study was submitted to the Ethical Review Committee of the University of Arizona College of Nursing and at the hospital used for data collection. The study was approved (Appendix C) and classified as an exempt study by the college and the hospital.

Informed consent was obtained from each of the subjects and the cardiologist for each of the subjects.
according to hospital policy. The subjects received a written disclaimer and were given the opportunity to voluntarily participate in the study (Appendix D). The subjects were allowed to control the degree of self-disclosure. There were no known risks to the subjects. Also, there was no known direct benefit to the subject although participation did allow them an opportunity to communicate their feelings. The only cost to the subject was the time needed to complete the three paper and pencil questionnaires.

**Data Analysis Plan**

Pearson correlational coefficients were used to describe the bivariate relationships among patient privacy, powerlessness, and subjective sleep characteristics. The level of significance for this study was established at $p < 0.05$. Descriptive statistics were used to describe demographic data.

**Summary**

The variables patient privacy, powerlessness, and subjective sleep characteristics were studied using a descriptive correlational design. Thirty subjects hospitalized for suspected and confirmed coronary heart
disease volunteered to participate in the study. Three questionnaires, the Patient Privacy Questionnaire (PPQ), the Patient-Others Questionnaire (POQ), and the Verran/Snyder-Halpern (VSH) Sleep Scale, were used to measure the concepts patient privacy, powerlessness, and subjective sleep characteristics.
CHAPTER 4

Results

The results of the data analysis are described in this chapter. A description of the sample and a report of the reliability of the instruments are presented. The correlations among the study variables and among the study variables and the demographic data are also described.

Sample

Demographic Characteristics

The subjects ranged from 48 years to 92 years of age (Table 2). The mean age and the median age were both 68 years. The total number of days hospitalized prior to participation in the study and the number of days in the Coronary Care Unit (CCU) were recorded for each subject. The number of days of pre-study hospitalization ranged from 2 to 12 days with a mean of 4.3 days and a median of 3.5 days. Eleven subjects (36.7%) were in the hospital for only two days. The number of days hospitalized in the CCU prior to transfer to the Step-Down Ward ranged from 0 to 8 days with a mean of 1.83 days. Ten subjects (33.3%) were never admitted to the CCU. Thus, a third (33.3%) of the subjects were not in the CCU at all during their current hospitalization and one fifth (20%) of the
Table 2

Demographic Characteristics of the Sample (N = 30)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Mean</th>
<th>sd</th>
<th>Median</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (in years)</td>
<td>68</td>
<td>9.82</td>
<td>68</td>
<td>48-92</td>
</tr>
<tr>
<td>ADMD</td>
<td>4.3</td>
<td>2.72</td>
<td>3.5</td>
<td>2-12</td>
</tr>
<tr>
<td>CCUD</td>
<td>1.83</td>
<td>2.05</td>
<td>1.0</td>
<td>0-8</td>
</tr>
</tbody>
</table>

ADMD = The number of days of hospitalization prior to data collection

CCUD = The number of days in the Coronary Intensive Care Unit during current hospitalization prior to data collection.
subjects spent only one day in the CCU (Table 2).

The convenience sample obtained from the Step-Down Ward consisted of 56.7% (n = 17) males and 43.3% (n = 13) females (Table 3). The majority (86.7%; n = 26) of the subjects were Caucasian; only three (10.0%) of the subjects were Hispanic; and, one (3.3%) was Black. The majority (66.7%; n = 20) of the subjects were married. Only one (3.35%) of the subjects was single and two (6.7%) were divorced. The remaining 23.3% (n = 7) of the subjects were widowed. All of the subjects had suspected or documented coronary artery disease with 63.3% (n = 19) currently admitted to the hospital with a diagnosis of rule/out myocardial infarction (Table 3). The other current diagnoses were congestive heart failure (CHF), arrhythmia, and pulmonary edema secondary to coronary heart disease. The majority (83.3%; n = 25) of the subjects were in semi-private rooms with one roommate. The remaining 16.7% (n = 5) subjects were in private rooms. The proportions of subjects in semi-private and private rooms reflect the ratio of semi-private to private rooms on the Step-Down Cardiac Care Ward.

Other Characteristics

The subjects were asked if they were currently under
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Type</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
<td>17</td>
<td>56.7</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>13</td>
<td>43.3</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Caucasian</td>
<td>26</td>
<td>86.7</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>3</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>1</td>
<td>3.3</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Single</td>
<td>1</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>20</td>
<td>66.7</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>2</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>Widowed</td>
<td>7</td>
<td>23.3</td>
</tr>
<tr>
<td>Medical Diagnosis</td>
<td>CHF</td>
<td>2</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>MI</td>
<td>19</td>
<td>63.3</td>
</tr>
<tr>
<td></td>
<td>Arrhythmia</td>
<td>4</td>
<td>13.3</td>
</tr>
<tr>
<td></td>
<td>Pulmonary edema</td>
<td>5</td>
<td>16.7</td>
</tr>
<tr>
<td>Room Type</td>
<td>Private</td>
<td>5</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>Semi-private</td>
<td>25</td>
<td>83.3</td>
</tr>
</tbody>
</table>

CHF = Congestive Heart Failure; MI = Myocardial infarction
any stress that could disrupt their sleep. The majority of the subjects (73.3; n = 22) denied stress and eight (26.7%) admitted stress.

Seventy percent (n = 21) of the subjects were admitted to rooms located near the nurses' station i.e., the six rooms across the hall from the Team Conference Center and telemetry monitor. The subjects in rooms located near the nurses station were considered exposed to more noise transmitted from the nurses' station. Seventy percent (n = 21) of the subjects had taken a sleeping pill prior to the night of measured sleep. Sleeping pills and noise are known to affect sleeping patterns; therefore, the location of the room in relation to the nurses' station and the ingestion of a sleeping pill was noted for each patient.

**Instrument Reliability**

Alpha coefficients were used to estimate the interval consistency reliability for each of the three instruments used in this study. The reliability estimates for the PPQ, POQ, and VSH Sleep Subscales follows.

**Patient Privacy Questionnaire**

The 13-item Patient Privacy Questionnaire (PPQ)
contained three items (# 8, 11, and 12) which did not perform well, resulting in an alpha reliability of .45. Therefore, these three items were eliminated from the PPQ. The remaining 10-item PPQ was found to have an internal consistency reliability alpha coefficient of 0.69. Nunnally (1978) suggests that an alpha of .70 and higher for an immature scale indicates an acceptable reliability. Thus, an alpha of 0.69 for the PPQ was accepted as an indication of reliability for the newly revised PPQ. All data were analyzed using the 10-item PPQ.

**Patient-Others Questionnaire**

The seven-item Patient-Others Questionnaire (POQ) contained one item (# 2) that did not function effectively with this sample. Item #2 was eliminated and all data were analyzed using a revised six-item POQ. The revised 6-item POQ was found to have an internal consistency reliability alpha coefficient of 0.81. Thus, the POQ was found to be a reliable instrument to measure powerlessness with this sample.

**Verran/Snyder-Halpern Sleep Scale**

The subscale of the Verran/Snyder-Halpern Sleep Scale measuring sleep disturbance (VSHD) was found to have an
internal consistency reliability alpha coefficient of 0.85. The sleep effectiveness subscale of the VSH Sleep Scale (VSHE) was found to have an internal consistency reliability alpha coefficient of 0.79. The sleep supplementation subscale of the VSH Sleep Scale (VSHS) was found to have an internal consistency reliability alpha coefficient of 0.77. Therefore, in accordance with Nunnally's (1978) recommendations for an alpha coefficient \( \geq 0.70 \) for an immature scale and \( \geq 0.80 \) for a mature scale, the alpha coefficients for the immature Sleep Supplementation Subscale and mature Sleep Disturbance and Effectiveness Subscales of the VSH Sleep Scale indicate that the subscales were reliable instruments to measure the subjective sleep characteristics of disturbance, effectiveness, and supplementation in these subjects.

**Means and Standard Deviations of the Instruments**

The means and standard deviations for each of the instruments are presented in Table 4. The means and standard deviations of each item of each scale are also reported.

**Patient Privacy Questionnaire**

The 10-item PPQ measuring patient privacy requires a
Table 4
Means and Standard Deviations of Total Scales
(N = 30)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Median</th>
<th>Possible Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPQ</td>
<td>3.66</td>
<td>0.43</td>
<td>3.70</td>
<td>1-5</td>
</tr>
<tr>
<td>POQ</td>
<td>3.56</td>
<td>1.19</td>
<td>3.58</td>
<td>1-6</td>
</tr>
<tr>
<td>VSHD</td>
<td>39.15</td>
<td>19.17</td>
<td>38.29</td>
<td>000-100</td>
</tr>
<tr>
<td>VSHE</td>
<td>66.44</td>
<td>20.95</td>
<td>65.13</td>
<td>000-100</td>
</tr>
<tr>
<td>VSHS</td>
<td>30.40</td>
<td>21.85</td>
<td>32.75</td>
<td>000-100</td>
</tr>
</tbody>
</table>

PPQ = Patient Privacy Questionnaire
POQ = Powerful Others Questionnaire
VSHD = Verran/Snyder-Halpern Sleep Disturbance Subscale
VSHE = Verran/Snyder-Halpern Sleep Effectiveness Subscale
VSHS = Verran/Snyder-Halpern Sleep Supplementation Subscale
response from strongly agree (value of 5), agree (value of 4), uncertain (value of 3), disagree (value of 2), or strongly disagree (value of 1). Therefore, the higher the score the greater the feelings of privacy. Negatively stated items were reverse coded prior to data analysis.

The total score mean for the PPQ was 3.66 with a median of 3.70 and a standard deviation of 0.43 (Table 4). The possible range of scores was from 1 to 5; however, subjects' total mean scores ranged from 2.4 to 4.3 (range = 1.9). The item means and standard deviations for the PPQ are summarized in Table 5.

Patient-Others Questionnaire

The 6-item POQ allowed for a response of agree strongly (value = 6), agree somewhat (value = 5), agree slightly (value = 4), disagree slightly (value = 3), disagree somewhat (value = 2), or disagree strongly (value = 1). Therefore, the higher the score the greater the feelings of powerlessness.

The total score mean for the POQ was 3.56 with a median of 3.58 and a standard deviation of 1.19 (Table 4). The possible range of scores for the POQ was 1 to 6; the subjects' total mean scores ranged from 1 to 5.67 (range = 4.6). The item means and standard deviations for
Table 5
Patient Privacy Questionnaire Item Means and Standard Deviations

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean*</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My personal privacy is respected at all times.</td>
<td>3.87</td>
<td>0.86</td>
</tr>
<tr>
<td>2. Hospital staff come into my room too frequently.</td>
<td>3.72</td>
<td>0.80</td>
</tr>
<tr>
<td>3. I may be alone when I so desire.</td>
<td>3.54</td>
<td>0.74</td>
</tr>
<tr>
<td>4. I sometimes feel like my body is on exhibit.</td>
<td>3.57</td>
<td>1.14</td>
</tr>
<tr>
<td>5. I am satisfied with the amount of time I'm left alone.</td>
<td>3.87</td>
<td>0.35</td>
</tr>
<tr>
<td>6. My modesty is NOT respected enough.</td>
<td>3.90</td>
<td>0.66</td>
</tr>
<tr>
<td>7. Patient privacy should NOT be expected in the hospital.</td>
<td>3.87</td>
<td>0.97</td>
</tr>
<tr>
<td>8. I can decide how long I want to be alone.</td>
<td>3.13</td>
<td>0.97</td>
</tr>
<tr>
<td>9. Hospital Staff should respect my modesty.</td>
<td>3.83</td>
<td>0.75</td>
</tr>
<tr>
<td>10. Modesty is an old-fashioned idea.</td>
<td>3.67</td>
<td>0.99</td>
</tr>
</tbody>
</table>

Total Scale                                                                | 3.66  | 0.43|

*Range: 1 (low) to 5 (high)
the POQ are seen in Table 6.

Verran/Snyder-Halpern Sleep Scale

The VSH sleep scale is a visual analogue scale that requires a mark placed on a horizontal 100 mm. line. Therefore, the response for each item may range from 0 to 100. The higher the score on an item the greater the value of the sleep characteristic. The items are divided into three subscales, the VSHD, VSHE, and VSHS.

The VSHD subscale includes items 1 (WASO), 6 (SL), 7 (SS), 8 (QD), 9 (MSA), 10 (QL), and 11 (MDS) as described by Verran et al. (1988). The score on item 7 was reversed prior to data analysis due to the negativity of the response in relation to the sleep characteristic. The total score for the VSHD may range from 0 to 100; however, subjects' total mean VSHD scores ranged from 1.14 to 80.86 (range = 79.71). The mean score of the VSHD subscale is 39.15 with a median of 38.29 and a standard deviation of 19.17 (Table 4). The means and standard deviations for each of the VSHD items are illustrated in Table 7.

The VSHE subscale includes items 2 (TST), 12 (RUA), 14 (SQS), and 15 (SSE). The scores for item 15 were reversed prior to data analysis due to the negativity of the response in relation to the sleep characteristic. The
Table 6

Patient-Others Questionnaire Item Means and Standard Deviations

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean*</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In order to make my plans work, I usually make sure they fit in with the desires of the staff members.</td>
<td>4.53</td>
<td>1.36</td>
</tr>
<tr>
<td>2. I have little chance of protecting my personal interests when I am in conflict with hospital staff members.</td>
<td>3.45</td>
<td>1.74</td>
</tr>
<tr>
<td>3. Getting what I want requires pleasing those people who care for me.</td>
<td>3.35</td>
<td>1.63</td>
</tr>
<tr>
<td>4. If staff members were to decide they didn't like me, I probably would not get good care.</td>
<td>2.90</td>
<td>1.67</td>
</tr>
<tr>
<td>5. I can only do what the staff members tell me to do.</td>
<td>3.60</td>
<td>1.83</td>
</tr>
<tr>
<td>6. In general, patients have very little power in the hospital.</td>
<td>3.77</td>
<td>1.68</td>
</tr>
</tbody>
</table>

Total Scale                                                                | 3.56  | 1.19|

*Range:  1 (low) to 6 (high)
Table 7
Verran/Snyder-Halpern Sleep Disturbance Subscale (VSHD)

Item Means and Standard Deviations

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean*</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 WASO = Wake after sleep onset</td>
<td>39.00</td>
<td>24.35</td>
</tr>
<tr>
<td>#6 SL = sleep latency</td>
<td>36.67</td>
<td>26.57</td>
</tr>
<tr>
<td>#7 SS = soundness of sleep</td>
<td>46.13</td>
<td>27.80</td>
</tr>
<tr>
<td>#8 QD = quality of disturbance</td>
<td>35.93</td>
<td>24.33</td>
</tr>
<tr>
<td>#9 MSA = mid-sleep awakening</td>
<td>49.97</td>
<td>29.26</td>
</tr>
<tr>
<td>#10 QL = quality of latency</td>
<td>29.70</td>
<td>27.73</td>
</tr>
<tr>
<td>#11 MDS = movement during sleep</td>
<td>37.93</td>
<td>25.00</td>
</tr>
</tbody>
</table>

Total VSHD Subscale                      | 39.15 | 19.17|

*Range: 000 (low) to 100 (high)
total score for the VSHE may range from 0 to 100. The subjects' total mean scores, however, ranged from 29.50 to 97.50 (range = 68.00). The mean score of the VSHE was 66.44 with a median of 65.13 and a standard deviation of 20.95 (Table 4). The individual item mean and standard deviation are reported in Table 8.

The VSHS subscale includes items 3 (DTS), 4 (AMS), 5 (PMS), and 13 (WAFA). The range for the subjects' total mean scores on the VSHS subscale was 0.75 to 80.5 (range = 79.75) with a possible range of 0 to 100. The total mean score of the VSHS subscale was 30.40 with a median of 32.75 and a standard deviation of 21.85 (Table 4). The individual item means and standard deviations are reported in Table 9.

**Correlations of Study Variables with the Demographics**

Pearson correlation coefficients were calculated for each of the variables under study with the subjects' age, number of days of hospitalization, and number of days in the CCU (Table 10). The strength and direction of the statistically significant relationships among the variables were identified. A positive relationship is determined by a positive value for the Pearson correlation coefficient; and, a negative relationship is determined by
Table 8

**Verran/Snyder-Halpern Sleep Effectiveness (VSHE) Subscale**

*Item Means and Standard Deviations*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean*</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSHE - VSH Sleep Effectiveness Subscale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#2 TST = total sleep time</td>
<td>64.13</td>
<td>22.99</td>
</tr>
<tr>
<td>#12 RUA = rest upon awakening</td>
<td>66.87</td>
<td>26.48</td>
</tr>
<tr>
<td>#14 SQS = subjective quality of sleep</td>
<td>67.07</td>
<td>25.74</td>
</tr>
<tr>
<td>#15 SSE = sleep sufficiency evaluation</td>
<td>67.70</td>
<td>30.36</td>
</tr>
<tr>
<td>Total VSHE Subscale</td>
<td>66.44</td>
<td>20.95</td>
</tr>
</tbody>
</table>

*Range: 000 (low) to 100 (high)*
Table 9
Verran/Snyder-Halpern Sleep Supplementation (VSHS)
Subscale Item Means and Standard Deviations

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean*</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSHS - VSH Sleep Supplementation Subscale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#3 DTS = daytime sleep</td>
<td>23.53</td>
<td>21.63</td>
</tr>
<tr>
<td>#4 AMS = morning sleep</td>
<td>33.17</td>
<td>33.38</td>
</tr>
<tr>
<td>#5 PMS = evening sleep</td>
<td>33.27</td>
<td>32.34</td>
</tr>
<tr>
<td>#13 WAFA = awake after final arousal</td>
<td>32.72</td>
<td>28.29</td>
</tr>
<tr>
<td>Total VSHS Subscale</td>
<td>30.40</td>
<td>21.85</td>
</tr>
</tbody>
</table>

*Range: 000 (low) to 100 (high)
Table 10

Pearson Product Moment Correlation Coefficients:  
Study variables with Demographic Variables (N = 30)

<table>
<thead>
<tr>
<th>Study Variables</th>
<th>Demographic Variables</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age</td>
<td>ADMD</td>
<td>CCUD</td>
</tr>
<tr>
<td>PPQ</td>
<td>( r = -0.31^* )</td>
<td>( r = 0.03 )</td>
<td>( r = -0.01 )</td>
</tr>
<tr>
<td>(p = 0.05)</td>
<td>(p = 0.44)</td>
<td>(p = 0.48)</td>
<td></td>
</tr>
<tr>
<td>POQ</td>
<td>( r = 0.33^* )</td>
<td>( r = -0.50^* )</td>
<td>( r = -0.41^* )</td>
</tr>
<tr>
<td>(p = 0.04)</td>
<td>(p = 0.00)</td>
<td>(p = 0.01)</td>
<td></td>
</tr>
<tr>
<td>VSHD</td>
<td>( r = -0.17 )</td>
<td>( r = 0.29 )</td>
<td>( r = 0.30^* )</td>
</tr>
<tr>
<td>(p = 0.18)</td>
<td>(p = 0.06)</td>
<td>(p = 0.05)</td>
<td></td>
</tr>
<tr>
<td>VSHE</td>
<td>( r = -0.04 )</td>
<td>( r = -0.18 )</td>
<td>( r = -0.05 )</td>
</tr>
<tr>
<td>(p = 0.42)</td>
<td>(p = 0.18)</td>
<td>(p = 0.39)</td>
<td></td>
</tr>
<tr>
<td>VSHS</td>
<td>( r = 0.35^* )</td>
<td>( r = -0.01 )</td>
<td>( r = 0.08 )</td>
</tr>
<tr>
<td>(p = 0.03)</td>
<td>(p = 0.48)</td>
<td>(p = 0.35)</td>
<td></td>
</tr>
</tbody>
</table>

PPQ = Patient Privacy Questionnaire

POQ = Powerful Others Questionnaire

VSHD = Verran/Snyder-Halpern Sleep Disturbance Subscale

VSHE = Verran/Snyder-Halpern Sleep Effectiveness Subscale

VSHS = Verran/Snyder-Halpern Sleep Supplementation Subscale

ADMD = The number of days of hospitalization prior to data collection

CCUD = The number of days in the Coronary Intensive Care Unit during current hospitalization prior to data collection.

* Significant at \( p \leq 0.05 \)
a negative value (Munro, Visintainer, & Page, 1986). The strength of the relationship is determined by the numerical value of the Pearson correlation coefficient indifferent to the positive or negative value. According to Munro et al. (1986) the following categories reflect the strength of a correlation: little, if any = 0.00 to 0.25, low = 0.26 to 0.49, moderate = 0.50 to 0.69, high = 0.70 to 0.89, very high = 0.90 to 1.00.

Age positively correlated with sleep supplementation (r = .35; p = .03) and with powerlessness (r = .33; p = .04) as shown in Table 10. Age negatively correlated with patient privacy (r = -.31; p = .05). Although the correlations were statistically significant, they were all of low magnitude.

The length of time hospitalized prior to participation in the study (ADMD) was negatively correlated with powerlessness (r = -.50; p = .00) as shown in Table 10. The number of days in CCU was correlated negatively with powerlessness (r = -.41; p = .01) and positively with sleep disturbance (r = .31; p = .05). The correlations were significant; however, all were of low magnitude.
Statistical Analysis of the Research Questions

The purpose of this study was to describe the direction and strength of the relationships among patient privacy, powerlessness, and subjective sleep characteristics. Pearson product moment correlation coefficients were used to describe the relationships among the variables. The level of significance was set at p ≤ 0.05. The empirical model (Figure 2) depicts the outcomes of the data analysis relative to the three research questions.

Question #1

The first research question addressed the relationship between patient privacy and powerlessness. The variables were found to have a low negative correlation (r = -.44; p = 0.01) as shown in Table 11.

Question #2

The second research question addressed the relationship between patient privacy (PPQ) and subjective sleep characteristics of sleep disturbance (VSHD), effectiveness (VSHE), and supplementation (VSHS). The PPQ and VSHD were not significantly correlated (r = -.22; p = .12) (Table 11). The correlation between PPQ and VSHE
Figure 2. Privacy-Power-Sleep Model with Empirical Outcomes: Operational Level

- **PPQ** = Patient Privacy Questionnaire
- **POQ** = Powerful Others Questionnaire
- **VSHD** = Verran/Snyder-Halpern (VSH) Sleep Disturbance Subscale
- **VSHE** = VSH Sleep Effectiveness Subscale
- **VSHS** = VSH Sleep Supplementation Subscale
was not significant \( r = .24; p = .10 \). No correlation was found between patient privacy and the subjective sleep characteristics of sleep supplementation \( r = -.28 \).

**Question #3**

The third research question asked about the relationship between powerlessness (POQ) and the subjective sleep characteristics of sleep disturbance (VSHD), effectiveness (VSHE), and supplementation (VSHS). The POQ and VSHD were found to have a nonsignificant correlation \( r = .11; p = .28 \) as presented in Table 11. When correlated with sleep effectiveness, powerlessness was found to have a significant negative but low relationship \( r = -.30; p = .05 \). The correlation between powerlessness and sleep supplementation was nonsignificant \( r = -.11; p = .28 \).

**Summary**

The results of the data analysis were presented in this chapter. The sample \( N = 30 \) consisted primarily of older Caucasian men and women who were admitted to semi-private hospital rooms with suspected or confirmed coronary heart disease. All study instruments demonstrated acceptable internal consistency reliability.
Table 11

Pearson Product Moment Correlation Coefficients:
Relationships among the Study Variables (N = 30)

<table>
<thead>
<tr>
<th>Variables</th>
<th>POQ</th>
<th>VSHD</th>
<th>VSHE</th>
<th>VSHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPQ</td>
<td>$r = -0.44^*$</td>
<td>$r = -0.22$</td>
<td>$r = 0.24$</td>
<td>$r = -0.28$</td>
</tr>
<tr>
<td></td>
<td>$(p = 0.01)$</td>
<td>$(p = 0.12)$</td>
<td>$(p = 0.10)$</td>
<td>$(p = 0.07)$</td>
</tr>
<tr>
<td>POQ</td>
<td>----</td>
<td>$r = 0.11$</td>
<td>$r = -0.30^*$</td>
<td>$r = -0.11$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$(p = 0.28)$</td>
<td>$(p = 0.05)$</td>
<td>$(p = 0.28)$</td>
</tr>
</tbody>
</table>

PPQ = Patient Privacy Questionnaire
POQ = Powerful Others Questionnaire
VSHD = Verran/Snyder-Halpern (VSH) Sleep Disturbance Subscale
VSHE = VSH Sleep Effectiveness Subscale
VSHS = VSHS Sleep Supplementation Subscale

* Significant at $p \leq 0.05$
Negative relationships were found between patient privacy and powerlessness (r = -.44) and between powerlessness and the subjective sleep characteristics of sleep effectiveness (r = -.30). Feelings of powerlessness were negatively related to total number of days of (r = -.50) and number of days in the Coronary Care Unit (CCU) (r = -.41). The number of days in the CCU was positively related to sleep disturbance (r = .30). Age was negatively related to patient privacy (r = -31) but positively related to powerlessness (r = .33) and sleep supplementation (r = .35).
CHAPTER 5

Interpretations, Conclusions, and Recommendations

The interpretation of the findings and conclusions of the study is presented in this chapter. Recommendations for further study and nursing implications are also described.

Relationships Among Variables in the Conceptual Framework

The results of the data analysis support the existence of a significant negative relationship between patient privacy and powerlessness. The greater the feelings of patient privacy the less powerless the patient is likely to feel. A significant negative relationship between feelings of powerlessness and perceptions of sleep effectiveness is also reflected by the data analysis. Therefore, as feelings of powerlessness increase the perception of sleep effectiveness decreases.

In general, these subjects felt they had achieved a fairly high degree of privacy. Altman (1975) states that if the achieved level of privacy equals the desired level of privacy the subjects boundary-control mechanisms are functioning effectively. According to Altman, the subject uses boundary-control mechanisms such as verbal behavior,
control of personal space, and territorial behaviors to balance the achieved and desired levels of privacy.

The subjects in this study also reported feeling a fairly high amount of powerlessness. The subjects may have been able to utilize some but not all of the boundary-control mechanisms which led to feelings of powerlessness since the data suggest that as feelings of powerlessness increased the perception of patient privacy decreased. This finding is consistent with Gerber's (1987) report of powerlessness in a study of perceptions of territorial control, powerlessness, and patient privacy by hospitalized adults on an orthopedic ward.

Patient privacy was not significantly related to subjective sleep characteristics. Although feelings of patient privacy were reported, the subjective sleep characteristics reflected some disturbance with decreased effectiveness and increased sleep supplementation.

Sleep effectiveness was negatively related to feelings of powerlessness. The feelings of powerlessness may have induced stress as suggested by Sutterley (1979) which negatively affected sleep effectiveness (Hilton, 1976). Stress increases cortisol levels (Carriero et al., 1986). Cortisol antagonistically lowers the serotonin levels that are responsible for sleep onset and
maintenance of NREM sleep (Carri`eri et al., 1986; Chuman, 1983)). Therefore, as feelings of powerlessness induce the stress response, sleep effectiveness may be decreased due to a lowered serotonin level which is responsible for sleep onset and maintenance. Sleep effectiveness may also have been affected by sleep disturbance since the analysis indicates a significant negative relationship between sleep disturbance and effectiveness.

Findings Related to Demographic Variables

Age

The results of the study suggest a low positive relationship ($r = .35$) between age and sleep supplementation. Age was also shown to be positively related to feelings of powerlessness ($r = .33$). In this sample, as age increased sleep supplementation and feelings of powerlessness also increased. Age was inversely related to feelings of patient privacy ($r = -.31$). That is, as age increased, feelings of patient privacy decreased.

As an individual ages the ability to implement effective boundary-control mechanisms may decrease also leading to feelings of decreased power and patient privacy. Sleep supplementation also increased with age.
Sleep supplementation may be a boundary-control mechanism to achieve a desired level of privacy.

Days of Hospitalization

The number of days admitted to the hospital prior to participation in the study was moderately and negatively related to feelings of powerlessness ($r = -.50$). Thus, the longer the patients were in the hospital, the greater the patients' feelings of power. Time is needed for the subject to learn and implement effective new boundary-control mechanisms such as sleep supplementation and camaraderie with other patients.

Additional Findings Related to the Variables in the Conceptual Framework

Patient Privacy

A majority of subjects agreed or strongly agreed ($X = 3.66; sd = 0.43$), on a scale of 1 (low) to 5 (high), that they had privacy as a hospitalized patient on the Coronary Care Step-Down Ward (Table 5). Item 6 on the Patient Privacy Questionnaire, a negative/reversed-scored item, had the highest item mean ($X = 3.90; sd = 0.35$) indicating that subjects felt their modesty was respected enough. Eighty-three percent of the subjects agreed or strongly
agreed ($X = 3.87; sd = 0.86$) that their personal privacy was respected at all times (Item 1). On item 7, the subjects tended to agree or strongly agree ($X = 3.87; sd = 0.97$) that privacy should be expected in the hospital. Subjects also reported relatively high satisfaction ($X = 3.87; sd = 0.35$) with the amount of time they were left alone (Item 5). Interestingly, the lowest item mean ($X = 3.13; sd = 0.97$) suggested the subjects were less certain about how long they wanted to be left alone (Item 8).

**Powerlessness**

In general, the subjects reported some feelings of powerlessness with a total scale mean of 3.56 ($sd = 1.19$) on a scale of 1 (strongly disagree) to 6 (strongly agree). As shown in Table 6, the highest item mean was found for the first item ($X = 4.53; sd = 1.36$) which stated, "In order to make my plans work, I usually make sure they fit in with the desires of the staff members." Subjects also tended to agree ($X = 3.77; sd = 1.68$) that patients have very little power in the hospital (Item 6). The lowest item mean ($X = 2.90; sd = 1.67$) suggested that subjects slightly disagreed that they would not get good care if the staff members did not like them (Item 4). That is, although the subjects expressed powerlessness in general,
they believed that they would get good care even if the staff members decided they did not like them.

Subjective Sleep Characteristics

The mean scores for each of the sleep characteristics influencing sleep disturbance (VSHD) subscale (Table 7) were higher than the mean scores of nonhospitalized subjects as determined by Verran and Snyder-Halpern and reported by Lindell (1988). The item mean scores were 12 to 20 points higher with the exception of the movement during sleep characteristic. The mean scores of the sleep characteristics of the sleep effectiveness (VSHE) subscale (Table 8) were not much different than the mean scores of nonhospitalized subjects as also determined by Verran and Snyder-Halpern and reported by Lindell (1988).

The majority of the subjects reported some sleep supplementation (Table 9). Data from nonhospitalized subjects for the supplementation subscale are not available at this time.

Limitations of the Study

Limitations of the study included the small sample size of 30. Another limitation was the exclusion of subjects who had surgery during their current admission.
since surgery was considered a stressful event that could affect sleep. Therefore, the study findings cannot be generalized to patients having surgery.

The greatest limitation was the need for the patients to be in the ward for two nights. Many of the patients were discharged after their first night on the ward and could not be included in the study. Therefore, the sample did not include that segment of the Coronary Care Step-Down Ward population that was admitted for only a short time.

Recommendations for Further Research

The study should be replicated with a larger sample to increase representativeness of the sample. The study should also be conducted in an intensive care unit and compared to other populations. The instruments measuring patient privacy and powerlessness are in developmental stages and need to continue to be improved for further studies.

Studies which identify variables that influence sleep quality are greatly needed. Nurses must strive to improve care to promote sleep especially for the hospitalized patient since nurses have considerable control of the hospital environment.
Implications for Nursing

Further research with larger samples is needed before the implications for nursing can be realized. Some relationships were described which add to the body of nursing knowledge. However, the small sample size may not have allowed for the true relationships to be measured.

In addition, while not a goal of this study, this study has contributed to instrument development with testing of the instruments. The reliability testing has influenced instrument development for the Patient Privacy Questionnaire and the Patient Others Questionnaire which may promote their use in clinical research.

Summary

The data analysis of this study suggested only two significant relationships among the study variables. The relationship between patient privacy and powerlessness and the relationship between feelings of powerlessness and sleep effectiveness were both negative.

In conclusion, the increase in feelings of powerlessness may be influenced by the subjects' perceptions that they were unable to utilize their normal boundary-control mechanisms to protect their privacy. Feelings of powerlessness may have decreased sleep
effectiveness by inducing stress which increases cortisol levels that antagonistically lower the serotonin levels that are responsible for sleep onset and maintenance of Slow Wave Sleep (Carrieri et al., 1986; Chuman, 1983). Therefore, as feelings of powerlessness increased feelings of patient privacy and subjective sleep characteristics of sleep effectiveness decreased.
APPENDIX A

Instrumentation Permission Forms
Request Form

I request permission to copy the Verran-Snyder-Halpern (VSH) Sleep Scale for use in my research entitled, "Relationships Among Perceptions of Patient Privacy, Powerlessness, and Subjective Sleep Characteristics." 

[Signature]

9-27-88
(date)

Permission is hereby granted to copy the VSH Sleep Scale for use in the research described above.

[Signature]

Joyce A. Verran, Ph.D., R.N.

9-30-88
(date)
Request Form

I request permission to copy the Patient Privacy Questionnaire (PPQ) and the Patient-Others Questionnaire (POQ) for use in my research entitled, Relationships Among Perceptions of Patient Privacy, Powerlessness, and Subjective Sleep Characteristics.

(Signature)

9-27-88
(date)

Permission is hereby granted to copy the PPQ and POQ for use in the research described above.

Rose M. Gerber, Ph.D., R.N.

9-30-88
(date)
APPENDIX B

Demographic Information Questionnaire

1. Subject No. _____
2. Diagnosis ______________________________________
3. Day of Hospitalization ______
4. No. of Days in Coronary Care Unit (CCU) ______
5. Room Type: (circle one) Private    Semi-private
6. Age _____    Sex: M    F
7. Ethnic Group ____________
8. Marital Status ____________
9. In subject's opinion, is stress currently being experienced which might disrupt normal sleep patterns?    Yes    No    Unknown
10. Did the subject take a sleeping pill within the past 24 hours?    Yes    No    Unknown
11. Is the subject's room near the nurses' station?    Yes    No
APPENDIX C

Human Subjects Approval Letter
MEMORANDUM

TO: Polly Banks Rauhl, RSN, RN

FROM: Suzanne Van Ort, Ph.D., RN, NNP
Associate Dean for Academic Affairs

DATE: September 27, 1986

SUBJECT: Human Subjects Review: "Relationships among Perceptions of Patient Privacy, Powerlessness, and Subjective Estimates of Sleep in Hospitalized Adults in the Coronary Care Unit"

Your project has been reviewed and approved as exempt from University review by the College of Nursing Ethical Review Subcommittee of the Research Committee and the Director of Research. A consent form with subject signature is not required for projects exempt from full University review. Please use only a disclaimer format for subjects to read before giving their oral consent to the research. The Human Subjects Project Approval Form is filed in the office of the Director of Research if you need access to it.

We wish you a valuable and stimulating experience with your research.

SVO/nn
APPENDIX D

Perceived Privacy, Power, And Sleep
Among Hospitalized Cardiac Patients

You are invited to participate in a study of hospital patient privacy, power, and sleep. Participation is voluntary and involves answering three short questionnaires which will take approximately 10 to 20 minutes of your time.

The purpose of the study is to learn more about how patients feel about some aspects of your care and how well you think you slept while in the hospital. The study is being conducted as part of my work at the University of Arizona College of Nursing and your responses will in no way affect the care you are receiving. Only your confidential code number will appear on the questionnaire and your name and your answers will be known only to the investigator.

Although there may not be any direct benefits to you, there are no known risks to you. You may choose to not answer some or all of the questions if you so desire. You may ask questions at any time during the study.

You will be giving your consent to participate in the study by responding to the questionnaires. If you choose to participate, your assistance is appreciated. If you choose to withdraw from the study, your decision will be respected. Your participation, or non-participation, will in no way affect your care.

Polly B. Ruehl, BSN., R.N.
Graduate Student
College of Nursing
University of Arizona
Tucson, Arizona 85721

Rose Gerber, PhD., R.N.
Thesis Advisor
REFERENCES


