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A CLINICAL STUDY TO TEST A NURSING CARE
APPROACH DESIGNED TO PROMOTE SLEEP

by

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ABSTRACT

The purpose of this study was to test an individualized nursing care approach which was designed to promote sleep and decrease the use of sleeping medication in the hospitalized person.

The study was done during January, February, and March of 1971. The sample population consisted of adult patients admitted to the medical wards of one Montana hospital. Twenty subjects were selected and matched for sex and an age range of no more than five years. The design for the study was experimental in nature and utilized an experimental group of ten patients and a control group of ten patients. The subjects in the experimental group received the individualized nursing care approach designed for this study which was administered by the investigator. The control group received routine bedtime nursing care which was administered by the hospital nursing staff. During the time the study was conducted, the investigator visited both groups of patients and data concerning the patients' subjective evaluations of how they had slept were collected. The subjects' charts were also checked to note if sleeping medication was taken.

On the basis of a non-statistical numerical comparison of the data, the investigator concluded that the findings indicated support for the two hypotheses formulated for the study which were:

- (1) Patients receiving the individualized nursing care approach designed for this study will subjectively report having slept better than patients not receiving the approach.
- (2) Patients receiving the individualized nursing care approach designed for this study will take less sleeping medication than patients not receiving the approach.

Chapter 1

INTRODUCTION

There is much discussion about individualized nursing care today. Beland states, "The nursing care of each patient should be based on his individual needs. Briefly stated, patient needs determine patient care."¹

The view has been put forth that every person is different in his own unique way. No two human beings are identical, even identical twins. Two people can undergo the same experience but each individual will react to this experience uniquely, not just because of genetic differences, but because each individual's perception is influenced by his past experiences.²

In our society high value is placed on the worth of the person as an individual. In the hospital environment the patient is the central focus of all activity and his needs take precedence. Service to a person involves granting recognition and not just viewing him as an anonymous body, number, or disease in a room.³ From this it is

¹Irene L. Beland, Clinical Nursing: Pathophysiological and Psychosocial Approaches (New York: The Macmillan Company, 1970), p. 11.

²Joyce Travelbee, Interpersonal Aspects of Nursing (Philadelphia: F. A. Davis Company, 1966), p. 29.

³Stanley H. King, Perceptions of Illness and Medical Practice (New York: Russell Sage Foundation, 1962), p. 310.

logical to think that nursing goals will be formulated around the person's needs.

One need that all persons have is the need to sleep. A periodic alternation of sleep with wakefulness is universal among members of the human species. To be sure, some persons sleep more than others; infants and children sleep more than adolescents, adolescents more than adults, and some adults more than others.⁴

According to Luce and Segal, Freud believed that anxiety about sleep and compulsive bedtime rituals are universal. The roots of our pre-retirement practices may have their beginnings in childhood. Nonetheless, these habits or practices do not cease after childhood. Somewhere closeted deep in the brain, sleep undoubtedly holds meaning and feeling for each human being.⁵ Levine states, "From childhood on, everyone practices a ritual that serves to induce the onset of sleep. How people prepare themselves for a night's rest is a highly individualized matter, but if they are not allowed the ritual in the hospital, they will have difficulty in falling asleep. The individual ritual is not always possible, of course. But certainly those activities that

⁴David Foulkes, The Psychology of Sleep (New York: Charles Scribner's Sons, 1966), p. 1.

⁵Gay Gaer Luce and Julius Segal, Sleep (New York: Coward - McCann, Inc., 1966), p. 22.

are possible should be allowed and even encouraged."⁶

Statement of the Problem

One of nursing's many patient oriented goals is the promotion of sleep. Would an individualized nursing care approach, designed to allow and assist the patient to maintain his usual pre-retirement routine and usual bedtime hour, promote sleep and decrease the use of sleeping medication in the hospitalized person?

Purpose of the Study

The purpose of this study was to test an individualized nursing care approach designed to promote sleep and decrease the use of sleeping medication in the hospitalized person.

Hypotheses

The investigator formulated the following hypotheses:

1. Patients receiving the individualized nursing care approach designed for this study will subjectively report having slept better than patients not receiving the approach.
2. Patients receiving the individualized nursing care approach designed for this study will take less sleeping medication than patients not receiving the approach.

⁶Myra Estrin Levine, Introduction to Clinical Nursing (Philadelphia: F. A. Davis Company, 1969), p. 439.

Assumptions

For purposes of this study, the investigator made the following assumptions:

1. The quality of a person's sleep is related to his individual pre-retirement routine, including his usual bedtime hour.
2. The quality of a person's sleep is influenced by the immediate environment.
3. The extra time the investigator spent with the patients in the experimental group provided the opportunity for the patient to express any anxieties he may have had.
4. The patients in the control group received routine bedtime nursing care.

Methodology

The design for the study was experimental in nature. The study utilized experimental and control groups. The sample consisted of twenty adult medical patients from one Montana hospital. The ten patients in the experimental group received the individualized nursing care approach designed for the study. They were matched with ten patients in a control group. It was possible to match the patients only on the basis of sex and an age range of no more than five years. Patients in both groups were visited daily by the investigator for three consecutive days; data concerning patients' subjective evaluations of their sleep were collected. The investigator also checked the subjects'

charts for evidence of sleeping medication taken during the three days. This data were then analyzed for differences between the experimental and control groups.

Limitations of the Study

This study had the following limitations:

1. The patients in the study were not matched for medical diagnosis.
2. The ability of the sample population to recall accurately and to report how they had slept may have affected the findings.
3. The variability of the level of anxiety in the study patients may be considered a limitation.
4. Environmental variables over which the investigator had no control (such as laboratory and/or X-ray procedures, room-mate disturbances, and the periodic checking of the patient by nighttime nursing personnel) may have affected the findings of the study.
5. Because of the small sample size, no generalizations can be made.

Definition of Terms

For purposes of this study, the investigator defined the following terms:

Individualized nursing care approach. This nursing approach provided that the investigator encouraged, allowed, and assisted the patients in the experimental group to freely express and maintain their usual pre-retirement routines including their usual bedtime hour as they defined them. For example, if the patient took an evening bath as part of his usual pre-retirement routine, the investigator provided the opportunity for him to do so. All nursing care prior to bedtime was provided by the investigator and, as part of this nursing approach, she did not offer sleeping medication to the patients in the experimental group. The investigator made every attempt to provide assistance geared to individual needs and routines as the patient expressed them verbally and/or nonverbally.

Pre-retirement routine. This term was defined as those habits or activities, overt or covert, that the patient customarily performed prior to going to bed in the evening.

Usual bedtime hour. This term was defined as that time of the evening at which the patient customarily retired.

Routine bedtime nursing care. This term was defined as those nursing measures provided for hospital patients prior to their retirement. Physical care was usually administered by nurses' aides and consisted of straightening the bed linen, providing fresh drinking water, and giving the patient a back rub. The investigator concluded (because of her experience, observations, and interviews with the medicine nurses

on the wards involved in this study) that the control patients were usually offered a sleeping medication if it was ordered on a prn - as necessary - basis.

Justification for the Study

Because sleep is an integral part of our daily life, the nurse in the hospital setting is involved in assisting patients to meet this need. Approaches which facilitate natural sleep on an individual basis are desirable for the patient. Therefore, studies need to be done which may increase the nurse's knowledge and competence in the area of sleep promotion.

Chapter 2

REVIEW OF LITERATURE

INTRODUCTION

All human beings sleep. Amid the darkness from which man is born and that in which his life will end, there occurs the darkness of sleep that ebbs and flows each day of his life. One-third of life is spent in this darkness of sleep and, although not everyone has to do his sleeping at night, nearly everyone sleeps for a long interval every twenty-four hours.⁷

Nurses have traditionally been concerned with promoting sleep for those individuals entrusted to their care. Because comprehensive nursing care includes night as well as day and evening care, nurses need to possess basic knowledge concerning sleep. This in turn should better enable them to meet the hospitalized person's sleep needs. The following review of literature explored those areas concerning sleep which the investigator felt were relevant to this study and would be beneficial to nurses.

⁷Gay Gaer Luce and Julius Segal, p. 37.

THE CIRCADIAN RHYTHMS

Rhythmicity is characteristic of nature and periodicity of behavior is common, not only to man, but to plants and animals as well.

There is a cosmic rhythm as the earth circumvents the sun every three hundred sixty-five days, five hours, and forty-eight minutes. Every twenty-nine and one half days, the moon returns to its same position relative to the earth and sun, thereby constituting the synodical month. The daily rhythm of darkness and light is a result of the earth revolving on its axis in relation to the sun and moon each twenty-four hours.⁸

It has been demonstrated by thousands of observations that, if organisms are maintained under laboratory conditions in which all time clues are obliterated, they still continue to measure out twenty-four periods with amazing accuracy. This phenomenon has led some researchers to deduce that a rhythmic period of approximately twenty-four hours is a fundamental characteristic of protoplasm. It may be that a period of twenty-four hours is a kind of absolute in the biotic kingdom. Many scientists now believe that within the bodies of all living organisms is a "living clock" dictating these periods.⁹ These rhythms or

⁸Myra Estrin Levine, p. 424.

⁹John Palmer, "The Many Clocks of Man," Cycles (Pittsburgh: Foundation for the Study of Cycles, Inc., Volume XXII, No. 2, 1971), p. 36.

periodicities of about twenty-four hours are the most studied and the best known. Halberg referred to these twenty-four hour periodicities as circadian rhythms. (cira-about and diem-day)¹⁰

According to Bunning many studies have been conducted in an attempt to alter the circadian rhythm of plants and animals to a periodicity other than one of about twenty-four hours, but these studies all failed.¹¹ Kleitman reported that efforts to establish in man a rhythm different than one of twenty-four hours were not successful. The physiological indicator of the temperature curve stubbornly clung to the usual twenty-four hour rhythm.¹²

Many changes in the body follow the circadian rhythm. A well-known and classic example is the twenty-four hour variation in body temperature.¹³ The body temperature serves as a reflection of energy production and metabolic activity so it is not surprising to note that there is a correlation between temperature variation, maximum physical activity, and a feeling of well-being. The opposite is true when the temperature reading is at the low point. Not everyone's temperature

¹⁰Nathaniel Kleitman, Sleep and Wakefulness (Chicago: The University of Chicago Press, 1967), p. 132.

¹¹Erwin Bunning, The Physiological Clock (New York: Springer - Verlog, Inc., 1967), p. 16.

¹²Nathaniel Kleitman, pp. 175-178.

¹³Nathaniel Kleitman, p. 138.

peaks in the morning or in the afternoon. Those persons who are described as "morning types" feel their best in the early part of the day because their temperature peaks in the morning. Of course, the "night owl" begins to feel his best much later in the day because his temperature peaks in the afternoon.¹⁴ The cause of this temperature cycle is unknown, but it is possible that it results from the intermeshing of multiple metabolic periodicities. Whatever its origins, the circadian temperature rhythm appears to be quite hard to alter in the normal adult.¹⁵

There are other physiological events which occur within the twenty-four hour circadian rhythm. For example, urinary excretion of water, chlorides, urea, and potassium has been found to peak in the early afternoon. Also, the number of granulocytes circulating in the blood reaches a peak at midnight and again in the afternoon. Blood pressure is highest in the evening and lowest in the morning. The liver, which plays a key role in the body's metabolism, has also been found to operate on a twenty-four hour rhythm.¹⁶

¹⁴Myra Estrin Levine, p. 426.

¹⁵Current Research on Sleep and Dreams (Bethesda: U. S. Department of Health, Education, and Welfare, Public Health Service Publication, No. 1389, 1966), p. 5.

¹⁶Myra Estrin Levine, p. 427.

Because man is not stationary in his habits and moves throughout the world, it is biologically necessary for circadian rhythms to be adaptable to change. Today jet travel provides for rapid movement across many time zones and these geographic relocations place significant stress upon man's endogenous clocks. For example, a person departing New York at 6:30 p.m. and flying nonstop to Rome will arrive at 8:30 a.m. just as the Italian city is rising. However, the traveler's biological clock is informing him that it is time to retire. He does not feel up to par because his circadian rhythms are desynchronized and he must restrict his activity until his body has resynchronized to the time zone in which he is visiting. It is apparent that this knowledge of circadian rhythms would prove advantageous to athletes, diplomats, and business tycoons, as they desire to be in peak form before entering into their respective activities in other countries.¹⁷

The one circadian rhythm which is recognized and valued by us all is the need to sleep sometime during each twenty-four hour day. This sleep-wakefulness cycle is the most concrete, observable twenty-four hour rhythm in man. Insofar as is known, most people throughout the universe sleep between five and eight hours at a stretch, commonly at night. If social custom were solely responsible for this, one would anticipate hearing about cultures with different habits, such as sleeping

¹⁷John Palmer, p. 39.

three times a day. If such cultures do exist, they have not been reported. However, the phenomenon of man doing his sleeping at night may have originated from a long history of necessity. Before electricity light was valuable, difficult to produce, and expensive to buy; for this reason the human world retired when darkness fell.¹⁸ So the rhythm of sleep and wakefulness, though determined by endogenous mechanisms, can be influenced by external stimuli such as light or temperature.¹⁹

The study of sleep patterns in higher organisms has demonstrated that periods of activity and rest vary in different species. Those species which sleep several times during a day are known as polyphasic.²⁰ Kleitman studied human infants and found that, though they begin life as polyphasic sleepers, the majority of babies are relatively monophasic by the fourteenth week of life. Parents undoubtedly attempt to hasten the length of time it takes an infant to become monophasic through early efforts to train and socialize their child to acclimate himself to their own monophasic sleep patterns.²¹

¹⁸Current Research on Sleep and Dreams, p. 3.

¹⁹Edward J. Murray, Sleep, Dreams, and Arousal (New York: Appleton-Century-Crofts, 1965), p. 26.

²⁰Edward J. Murray, p. 26.

²¹Nathaniel Kleitman, pp. 132-138.

From this material it can be seen that circadian rhythms persistently operate within the very cells of our body, keeping us in tempo with life and providing ways in which we can adapt to meet the challenge of survival. Perhaps one cannot say that the circadian rhythm is the sole reason man sleeps for long periods, but there is strong evidence that it is closely related to our pattern of sleep. The study of biological rhythms holds great promise in helping man understand that mysterious one-third of his life known as sleep.²²

THE STAGES OF SLEEP

Now I lay me down to sleep
I pray the Lord my soul to keep
If I should die before I wake
I pray the Lord my soul to take

It would seem that in reading this familiar childhood prayer that one can detect a carryover of a primitive supernatural association between sleep and death. Indeed, death is still referred to in such colloquialisms as the 'peaceful sleep' and the 'eternal rest'. That period of our daily lives which is devoted to slumber has been viewed as time spent in unconscious oblivion.

From the outside the body may appear relatively motionless, but consistent and astute observation reveals an occasional sporadic twisting or jerking, a murmur, mutter or phrase, or a fluttering of the eyelids.

²²Current Research on Sleep and Dreams, p. 8.

These phenomena suggest that sleep is not a state of unconsciousness and oblivion. Indeed, sleep as we now know it is a progression of recurrent stages denoting brain and body activity.²³

With the development and the use of the electroencephalogram (EEG), these various stages or cycles of sleep have been recorded and identified. The EEG machine allows researchers to watch brain activity. Conductive metal electrodes, either attached to the scalp or implanted in the brain, transmit the natural beat of the brain area through changes of electrical potential. The EEG machine amplifies these electrical impulses and records them on graphic paper, the resultant oscillations being termed brain waves. Their amplitude indicates the changing amount of voltage generated in the brain area and the shapes of these waves indicate the speed of the electrical changes within.²⁴

Electroencephalography had its beginnings when the German psychiatrist Berger demonstrated that the brain continuously emitted very low voltage electrical waves. During the early thirties the discovery of the EEG proved useful as a clinical tool to aid in the study of brain pathology. Then in 1937 Loomis, along with his colleagues, discovered that the brain waves demonstrate a definite change with the onset of sleep and these changes persist throughout the sleep

²³Gay Gaer Luce and Julius Segal, p. 56.

²⁴Current Research on Sleep and Dreams, pp. 9-10.

period. This launched the study and classification of the stages of sleep.²⁵

On the basis of the EEG tracings Dement and Kleitman have developed a scoring system which results in four stages of sleep depth and a fifth stage labeled I-REM.²⁶

The first stage of sleep, or stage I, is characterized by low voltage and irregular, rapidly changing brain waves of eight or less cycles per second.²⁷ Those brain tracings known as alpha waves, which characterize the waking period, are disappearing during this stage.²⁸ However, a person can be easily awakened during this phase or stage of sleep and if aroused may insist he was not asleep. During stage I a person may be experiencing a floating sensation with occasional idle thoughts.²⁹ Body musculature is relaxing and heart rate begins to slow. This stage of sleep lasts only a few minutes and if one is not disturbed, he will descend into the next level of sleep.³⁰

²⁵Wilse B. Webb, Sleep: An Experimental Approach (New York: The Macmillan Company, 1968), p. 14.

²⁶Wilse B. Webb, p. 15.

²⁷Gay Gaer Luce and Julius Segal, p. 66.

²⁸Wilse B. Webb, p. 15.

²⁹Current Research on Sleep and Dreams, p. 11.

³⁰Gay Gaer Luce and Julius Segal, p. 67.

On the EEG, the second stage of sleep is heralded by the presence of "sleep spindles" which are more sharply pointed waves than alpha waves. These waves are low voltage and tend to occur in frequent bursts of fourteen to sixteen cycles per second.³¹ During stage II of sleep a person's eyes may appear to roll slowly. If aroused at this point one may believe he has been thinking or indulging in reverie. It is most commonly during stage II that a phenomena known as the K-complex appears on the EEG tracing. This consists of a high voltage biphasic wave, usually followed by a short train of alpha waves, and is a response to a rhythmic sensory stimulation.³² Stage II usually lasts about a half hour; then the EEG pattern indicates the presence of the next stage of sleep.³³

The third stage of sleep, or stage III, is characterized by large slow brain waves of high amplitude occurring at the rate of one or two cycles per second. To awaken a person in stage III requires a louder noise or a repetition of his name. His body muscles are very relaxed, heart rate continues to slow, body temperature falls, and blood pressure declines, as one continues to descend to the next level.³⁴

³¹Wilse B. Webb, p. 15.

³²Werner P. Koella; Sleep (Springfield: Charles C. Thomas Publishers, 1967), pp. 16-17.

³³Current Research on Sleep and Dreams, p. 11.

³⁴Gay Gaer Luce and Julius Segal, p. 69.

The fourth stage of sleep, or stage IV, is often known as "delta sleep" because the EEG tracing demonstrates large, synchronous brain waves of one to two cycles per second.³⁵ Stage IV could well be tagged the most oblivious sleep, as the muscles are totally relaxed and the person is practically immobile. His respirations are slow and even and his heart rate and temperature continue to decline. Should a person be aroused during stage IV, he would come into focus slowly and may feel blank mentally. It is interesting to note that during delta sleep, the brain shows a great response to external stimuli such as sounds, but those systems of the brain which convert the sound stimuli into conscious sensation appear not to be working in their usual way. This may account for the somnambulist's negotiating his environment as if he perceived it, but not being able to recall this when awakened. It is also during stage IV sleep that youngsters commonly wet their beds.³⁶ Normally a person spends a large part of his sleeping time in the first half of the night in stage IV, especially if he has lost sleep. Studies by Webb and Harmon demonstrated that people who are deprived of stage IV sleep will later spend time compensating for the loss.³⁷

³⁵Gay Gaer Luce and Julius Segal, p. 69.

³⁶Current Research on Sleep and Dreams, pp. 11-12.

³⁷Gay Gaer Luce and Julius Segal, p. 70.

About sixty to ninety minutes from the time a person falls asleep, he begins drifting up from stage IV into III and on into the lighter sleep of stage II. Then he enters stage I-REM which is now known as a special variety of stage I sleep.³⁸ Stage I-REM sleep is characterized by the same EEG tracings as stage I, but is accompanied by rapid eye movements (abbreviated REMs) as well as other physiological changes.³⁹

According to Koella, sleep subjects who were aroused while exhibiting REM sleep commonly recalled dreams, whereas those subjects awakened during the other sleep stages rarely recalled dreams. From this evidence rose the almost universally accepted theory that REM sleep is the state of dreaming. Further studies supplied evidence that the direction and speed of the eye movements during REM sleep were correlated with dream content. For example, if a person dreamed about two people throwing tomatoes at one another, his eye movements were found to be horizontal, while if he dreamed of climbing ladders his eye movements were found to be jerky and vertical.⁴⁰

As stated, other physiological changes occur during REM sleep. The heart rate, blood pressure, and respiration become highly variable,

³⁸Gay Gaer Luce and Julius Segal, p. 71.

³⁹Wilse B. Webb, p. 16.

⁴⁰Werner P. Koella, pp. 16-17.

occasionally fluctuating wildly. If the person were awake, he would appear frightened or highly agitated. It is during REM sleep that the adrenal glands secrete stimulating hormones and some of these steroids reach their maximum concentration during the early morning hours when stage I-REM is the dominant stage of sleep. It may be that the physiological stresses exhibited during REM sleep are a factor in such events as nighttime coronaries and asthma attacks.⁴¹

In spite of these physiological manifestations the body muscles are quite flaccid. In fact, the head and neck muscles are so slack that they would not support the head and chin.⁴²

Approximately four to six times a night a sleeper drifts up and down through the stages of sleep and will also enjoy a period of REM sleep. While stage IV sleep occurs predominantly during the early portion of the night, REM sleep usually dominates in the latter half of the night. It is interesting to note that no two individuals demonstrate an identical pattern of REM sleep. Every person has a pattern of REM sleep that is as unique to him as his fingerprints. The adult person spends twenty-four percent of his sleeping time in REM sleep, even those persons who deny that they ever dream.⁴³

⁴¹ Gay Gaer Luce and Julius Segal, pp. 72-74.

⁴² Gay Gaer Luce and Julius Segal, pp. 73-74.

⁴³ Myra Estrin Levine, p. 434.

Stage I-REM sleep is important for the general well-being of an individual and EEG findings indicate that, when a person is deprived of REM sleep, he will compensate for this loss, given the opportunity. Evidence has been gathered suggesting that interference with REM sleep eventually results in behavioral changes during the waking hours. These changes can become quite bizarre and indicate disorientation from reality. Of particular interest to nurses is the fact that sedative drugs are responsible for deprivation of REM sleep. Also, alcohol depresses stage I-REM sleep and perhaps the delirium tremors suffered by the alcoholic are related to this deprivation.⁴⁴

It is not always possible to tell what stage of sleep a person is in, but careful observation will disclose rapid eye movements and, if a nurse must awaken a patient to administer a treatment or drug, it is probably better for the person if he is not interrupted at the beginning of stage I-REM sleep.⁴⁵ It is apparent to the investigator that it would behoove the nurse to be cognizant of not only stage I-REM sleep, but all of the stages of sleep. This knowledge will better enable her to understand what is happening when her patients begin to sleep.

⁴⁴Myra Estrin Levine, pp. 435-436.

⁴⁵Myra Estrin Levine, p. 436.

SOCIO-CULTURAL VIEWS OF SLEEP

Literature concerning the physiological aspect of sleep is plentiful but that dealing with the habits and attitudes of man's sleep is much less abundant. Nonetheless, the process of socialization within one's family and specific culture undoubtedly influences his sleep behavior.

The very environment for sleep, the bedroom and the bed, constitute the milieu for many of life's major and highly personal dramas. Most people are born in bed and also die there. The bed is the place assigned the ill. But the bed is also a place of pleasure, for to go to bed can mean to make love. Secrets, hostile and friendly emotions, and anxieties find their release in the bedroom. The bedroom can be a chamber of rest and restoration for the weary or a chamber of anguish for the insomniac.⁴⁶

The private bedroom was an invention of the fifteenth century. But wherever there is poverty or crowded living space, families may all sleep in one common room. The cave was the first bedroom in which all slept in communal style. Today African bushmen, who often sleep on the ground, keep their children cuddled close not only for warmth, but for protection and security. It is not uncommon for the children

⁴⁶Gay Gaer Luce and Julius Segal, pp. 22-23.

of large families to sleep together or share a bedroom. This huddling of the family may date back to our hirsute prehistoric ancestors, for the large primates such as gorillas sleep close together at night.⁴⁷

Attitudes toward sleep have their origins in infancy. When the newborn child enters a household, his sleep patterns are polyphasic. After some harassing weeks of sleep interruption for his parents, the infant begins to adapt to their monophasic sleep pattern. His sleep education has already begun and his socialization process will influence the feelings he develops concerning sleep.⁴⁸

By the time a child reaches three years of age, sleep may be a major issue in his daily life. Some pediatricians claim there is a new trend in the most recurrent problems of parents with their children. Twenty to thirty years ago family meals were often the major problem area and cajoling and bribery were utilized to encourage children to eat their meals. Today the problem area more commonly seems to center about sleep and bedtime struggles, particularly with small children. This does not necessarily mean children have changed but times have, for these parents carried the residual tensions of the depression era when food was a tense issue for millions of hungry Americans and they wanted their children well fed. With research and the subsequent

⁴⁷Gay Gaer Luce and Julius Segal, p. 25.

⁴⁸Gay Gaer Luce and Julius Segal, p. 23.

development of palatable baby foods, eating problems declined and sleep problems came more into the limelight. Little research has been done in the area of the child who presents a sleep problem.⁴⁹

According to Murray, society has a strong interest in determining sleep behavior. A society which does not place some regulations on sleep behavior could be economically disrupted; all facilities would have to operate continuously to meet everyone's varied and individual needs.⁵⁰

There are other ways in which one's society and culture affect his sleeping patterns. For example, the Tibetans believe that sleeping during the daytime can induce a fever. The Arab Bedouin display a polyphasic sleeping pattern as a result of their fear of, and participation in, nighttime raiding. Hindus, when idle or hungry, can easily slip into a dozing state at will. This pattern is most likely related to the chronic state of hunger endured by many Indians and is epitomized in the Hindu proverb, "He who sleeps, dines." The South American siesta tradition best demonstrates cultural adaptation to heat.⁵¹

At one time people in the Fiji Islands of the Southwest Pacific took great care never to abruptly awaken a sleeping man because his soul

⁴⁹Gay Gaer Luce and Julius Segal, pp. 23-24.

⁵⁰Edward J. Murray, p. 300.

⁵¹Edward J. Murray, p. 301.

was out wandering and needed time to return and re-enter his body.⁵²

Even such a simple thing as body position during sleep is subject to social and cultural modification. In parts of Polynesia there are people who sleep with their heads facing only east, because to the east lies an unoccupied portion of the house used just for funerals. Many Iranians sleep facing Mecca; positioning on their left side is thought to prevent indigestion. The great English author Charles Dickens is said to have slept with his head facing due north because he labored under the belief that he would benefit from magnetic currents emanating north to south between the poles.⁵³

Much of these sleep behaviors suggest a religious mysticism associated with sleep. According to Murray the predominant religious ideology of the United States is termed the "Protestant or Puritan ethic." The basic thought of this ideology is that hard work is good in the eyes of God and, therefore, the best antidote against religious doubts, sexual desires, idle talk, and excessive sociability. It is logical to suspect these attitudes would apply to sleep; for this reason Murray conducted several opinionnaires in order to get an idea of the socio-cultural values placed on sleep in our society. He found what he believed to be a positive correlation between attitudes concerning

⁵²Gay Gaer Luce and Julius Segal, p. 26.

⁵³Gay Gaer Luce and Julius Segal, pp. 21-24.

sleep and the "Protestant ethic" ideology. For example, while sleeping for a duration of eight hours was acceptable by respondents, sleeping more than eight hours was not acceptable but sleeping for less than eight hours was. Murray believed this attitude toward sleep duration was related to the Protestant ethic of hard work and little idleness.⁵⁴

It would seem that even though sleep is a physiological, endogenous event it is decidedly influenced by society and culture. Furthermore, this sleep education begins in childhood and these ideas are strongly engrained. Although certain cultural commonalities may be found, all people are individuals and each one of us will have certain feelings and attitudes concerning sleep which have meaning for us alone.

PSYCHOLOGICAL VIEWS CONCERNING SLEEP

Sleep Deprivation

Sleep deprivation and its effects is an area of interest to the psychologist. What bodily and behavioral changes does the man who is deprived of sleep exhibit? Study in this area really gained impetus in the fifties, during which time sleep starvation laboratories began to collect data dealing with this subject.⁵⁵

⁵⁴Edward J. Murray, pp. 302-305.

⁵⁵Current Research on Sleep and Dreams, p. 18.

Some of the most often reported changes following sleep deprivation include increasing fatigue, slowed reaction times, feelings of persecution, inability to concentrate, irritability, and periods of misperception and disorientation. When illusions and hallucinations are present, they are primarily of the visual and tactile type, not auditory. As the period of sleep loss progresses, these changes become more intense and seem more pronounced in the early morning hours.⁵⁶

Kollar *et al.*, conducted a study in which four healthy males underwent two hundred and five hours of sleep deprivation. They found that with increasing sleeplessness, the subjects suffered a decline in perceptual, cognitive, and psychomotor functions. The subjects were unable to read after the third day because of their inability to concentrate. Psychologically, the study subjects showed increasing visual misperception, temporal disorientation, and three of the subjects experienced hallucinations. Follow-up on three of the subjects failed to demonstrate any permanent abnormalities in their sleep patterns or behavior after the sleep deprivation was ended.⁵⁷

⁵⁶Laverne C. Johnson, "Psychological and Physiological Changes Following Total Sleep Deprivation," Sleep: Physiology and Pathology, ed. Anthony Kales (Philadelphia: J. B. Lippincott Company, 1969), pp. 208-210.

⁵⁷Edward Kollar *et al.*, "Psychological, Psychophysiological, and Biochemical Correlates of Prolonged Sleep Deprivation," The American Journal of Psychiatry (Washington, D. C.: American Psychiatric Association, Volume 126, No. 4, October, 1969), pp. 488-496.

Studies at Walter Reed Hospital found that people who are deprived of sleep also tend to withdraw from outside stimuli and show confusion between their own thoughts and external events. The sleep starved subject may begin to experience certain bodily sensations. Some complained of a tightness about their heads which made them feel like they were wearing a hat. Others complained of burning or itching eyes and blurred vision. Small objects seemed to flit out of place, subjects experienced difficulty with depth perception, and chairs seemed to change size. Lights appeared to have a ring or halo of fog surrounding them and ultimately, the floor began to undulate for some.⁵⁸

Murray reports studies in which subjects deprived of sleep exhibited aggression. The amount of aggression expressed by the subjects seemed to be related to the means utilized in keeping the subjects awake. Those studies which utilized severe or harsh methods seemed to provoke a more intensely hostile reaction among the study subjects. Murray also felt that aggression in sleep deprivation studies was related to situational factors which inhibited or facilitated the individuals overt manifestation of aggression.⁵⁹

Sleep deprivation has often, though not always, produced behavior that simulates a psychotic reaction. Usually this is seen after

⁵⁸Current Research on Sleep and Dreams, p. 19.

⁵⁹Edward J. Murray, pp. 219-223.

prolonged wakefulness. This phenomenon commonly disappears after sleep is restored. It is thought that when a strong psychotic reaction develops during sleep loss, perhaps it is because the subject may have been predisposed to this behavior in the past.⁶⁰ It is interesting to note that chronic psychotic patients show a return of their acute symptoms after prolonged sleep deprivation.⁶¹

There is some evidence that age is an important factor in our reactions to sleep loss; younger persons seem better able to withstand sleep deprivation. This has also been found in studies with rats in which the immature young rats demonstrate a greater stamina during sleep loss than older rats.⁶²

Sleep deprivation alters a person's EEG patterns and these changes begin to appear after thirty-six to fifty hours of sleep loss.⁶³ Johnson reported that on the first night of recovery sleep (after two to four nights without sleep) the EEG tracings revealed an increase in stage IV, with REM sleep remaining the same. In prolonged sleep deprivation of two hundred hours, stage IV still showed the greatest increase

⁶⁰Laverne C. Johnson, pp. 207-208.

⁶¹Edward J. Murray, p. 245.

⁶²Edward J. Murray, p. 245.

⁶³John C. Krantz, Jr., C. Jelleff Carr, and Bert N. La Du, Jr., (eds.) The Pharmacological Principles of Medical Practice (Baltimore: The Williams and Wilkins Company, 1969), p. 177.

on the first recovery night, but REM sleep also showed an increase. However, on the second recovery night after sleep deprivation, REM sleep showed its greatest increase. After three to four recovery nights, the EEG tracings returned to the subject's predeprivation pattern.⁶⁴ Partial sleep deprivation also has been found to alter an individual's usual EEG sleep patterns.⁶⁵

Insomnia

Many complaints are made concerning sleep problems including such common nuisances as snoring and sleep talking. But the most widespread complaint is undoubtedly insomnia.

Kleitman divides insomnia into three major kinds: (1) initial, in which the onset of sleep is delayed, (2) intermittent, with one or more periods of wakefulness in the night, and (3) terminal, in which the sleeper awakens too early and is not able to fall asleep again.⁶⁶

Long described five general causes for insomnia: (1) physical, (2) physiological, possibly from interruption of circadian rhythms, (3) psychological, (4) iatrogenic (drug induced), and (5) idiopathic.⁶⁷

⁶⁴Laverne C. Johnson, p. 217.

⁶⁵Wilse B. Webb, "Partial and Differential Sleep Deprivation," Sleep: Physiology and Pathology, ed. Anthony Kales (Philadelphia: J. B. Lippincott Company, 1969), p. 230.

⁶⁶Nathaniel Kleitman, p. 275.

⁶⁷Barbara Long, "Sleep," The American Journal of Nursing (New York: American Nurses Association, Volume 69, No. 9, 1969), p. 1899.

Sleep disorders are often precursors to mental illness. Many mental illnesses and suicidal attempts are preceded by troubled sleep and visits to the doctor requesting sleeping pills. In 1965 a survey conducted on several hundred psychiatric patients indicated that seventy percent of them reported experiencing sleep disturbances prior to their admission for treatment.⁶⁸ It is interesting to note that sleep therapy has even been employed as a method of treatment in mental illness and was described as long ago as the middle of the nineteenth century.⁶⁹ Sleep therapy has been used in schizophrenia and various neuroses, although the effectiveness of this treatment for schizophrenics has been a source of disagreement among doctors.⁷⁰

In studies at the University of Chicago, Monroe found that poor sleepers fell asleep more slowly than good sleepers. However, the poor sleeper greatly exaggerated this difference in self reports. Poor sleepers awakened more often during the night than good sleepers. Poor sleepers also spent a total of seventeen percent of their sleep time in stage REM as compared to twenty-four percent for good sleepers. This difference was due to length rather than number of REM sleep periods.

⁶⁸Current Research on Sleep and Dreams, pp. 30-31.

⁶⁹B. V. Andreev, Sleep Therapy in the Neuroses (New York: Consultants Bureau, 1960), p. 25.

⁷⁰B. V. Andreev, p. 27.

It was really not known why poor sleepers exhibited these stage differences. But to simply dismiss the person who complains of insomnia as a hypochondriac may not be entirely fair. It may be that poor sleepers experience more anxiety and depression and have peculiarities of thought; however, Monroe claimed they did not appear to be significantly more hypochondriacal than good sleepers. More studies are needed in this area of sleep disorder in which both the quality as well as the quantity of the insomniac's sleep is monitored.⁷¹

Dreams

In the fifties Eugene Aserinsky, a graduate student at the University of Chicago, observed recurrent periods of rapid eye movements (REMs) in sleeping subjects. It was found that when these subjects were aroused during these REM episodes, they nearly always remembered dreaming. However, when these same subjects were awakened during the non-REM stages of sleep, they rarely remembered dreams.⁷² Further studies have shown that all people dream every night and furthermore, they dream in regular cycles, each for approximately the same amount of time. The

⁷¹ Allan Rechtschaffen and Lawrence Monroe, "Laboratory Studies of Insomnia," Sleep: Physiology and Pathology, ed. Anthony Kales (Philadelphia: J. B. Lippincott Company, 1969), pp. 160-167.

⁷² Julius Segal and Gay Gaer Luce, "To Sleep: Perchance to Dream," Today's Health (New York: The American Medical Association, Volume 47, No. 10, October, 1969), pp. 48-49.

stage of sleep known as REM sleep, stage I-REM sleep, or paradoxical sleep, is now accepted as the stage when dreaming occurs. The average young adult person dreams about twenty to twenty-four percent of his sleeping time in four to six REM periods every sixty to ninety minutes.⁷³

According to Foulkes, there is some evidence that dream content can be influenced by certain pre-sleep manipulations but this evidence was rather inconclusive. Some data suggested that dream content can be influenced by direct hypnotic suggestion prior to sleep. Foulkes found that dreams following exposure to a violent television film tended to be more wordy when described, more imaginative, more vivid, and more emotional than dreams following exposure to a nonviolent television film.⁷⁴

Studies conducted by Frederick Snyder have correlated physiological changes with dream content. One symptom which is indicative of an intense dream is highly irregular respiration similar to that of a person experiencing anxiety or impatience. Other studies have shown that penile erections accompany almost all dreaming periods in males, from birth on. Those dreams which are not accompanied by erection or in which sudden detumescence occurs, seem to be dreams of terrible

⁷³Current Research on Sleep and Dreams, p. 70.

⁷⁴David Foulkes, pp. 144-153.

anxiety involving violence and body mutilation.⁷⁵

Because alcohol does indeed diminish the duration of REM periods (and, therefore, dreaming), it has been speculated that an alcoholic's D.T.'s or delirium tremors may be the hallucinations of waking dreams breaking through after years of continued dream suppression.⁷⁶

Although individual variances occur, many studies in which the subjects were deprived of REM sleep found that these people began to eat more, suffered anxiety, were unable to concentrate, and generally experienced psychological discomfort. This all seemed to indicate that people need to dream. All REM deprivation studies have shown that, following deprivation, the loss of REM sleep and dreaming is compensated by the body. It would seem we have not just a psychological need to dream, but a physiological need as well.⁷⁷

DRUGS AND SLEEP

Because this study was concerned with the amount of sleeping medication taken by all the subjects, it seems appropriate to briefly review literature on the pharmacology of sleep.

⁷⁵Current Research on Sleep and Dreams, p. 99.

⁷⁶Current Research on Sleep and Dreams, p. 43.

⁷⁷Current Research on Sleep and Dreams, p. 71

Drugs which are used to induce sleep are classified as central nervous system depressants. Krantz classified drugs that induce sleep as hypnotics or soporifics, and he feels barbiturates belong to this classification.⁷⁸ One also hears the term sedative. Bergersen, Krug, and Goth feel that the only difference between a hypnotic and a sedative action is one of degree. The hypnotic is given in full dosage prior to retirement and produces sleep soon after administration. When this same drug is given in reduced dosage, several times a day and perhaps at bedtime, it is called a sedative.⁷⁹

It is well accepted that hypnotics induce sleep, but do they also alter the EEG sleep patterns of the individual? This knowledge would have value for the nurse who commonly administers sleeping medication to her patients.

Several drugs, Dalmane (flurazepam), Doriden (glutethimide), and Nembutal (pentobarbital), have been found to produce significant decreases in stage IV sleep. This decrease was most prominent with Dalmane; there was small recovery for two nights after the drug was discontinued. Kales *et al.*, feel that the clinical significance of

⁷⁸John C. Krantz, Jr., C. Jelleff Carr, and Bert N. La Du, Jr., p. 176.

⁷⁹Betty S. Bergersen, Elsie E. Krug, and Andres Goth, Pharmacology in Nursing (Saint Louis: The C. V. Mosby Company, 1966), p. 264.

these changes in the length of stage IV sleep are yet to be determined.⁸⁰

Kales *et al.* also found that Doriden, Noludar (methprylon), Seconal (secobarbital), Quaalude (methaqualone), and Nembutal produced moderate to marked decreases in the percentage of time spent in stage I-REM sleep. REM suppression was found to vary with each individual drug and was greater with some than others.⁸¹

According to an editorial in the Journal of the American Medical Association, a study done in Great Britain showed that hypnotic induced sleep not only decreased the percentage of time spent in REM sleep, but also delayed the onset of this stage. This study also showed that when the hypnotic drug was withdrawn, the onset of REM sleep came much sooner and lasted longer. It took a period of two weeks for the subjects' REM sleep activity to return to normal. The author of the article seriously questioned if physicians are justified in "almost routinely" ordering a hypnotic drug for hospitalized individuals.⁸²

⁸⁰Anthony Kales *et al.*, "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," Sleep: Physiology and Pathology (ed.) Anthony Kales (Philadelphia: J. B. Lippincott Company, 1969), p. 335.

⁸¹Anthony Kales *et al.*, pp. 332-334.

⁸²"Sleep Now, Pay Later," The Journal of the American Medical Association (Chicago: American Medical Association, Volume 208, No. 8, May 26, 1969), p. 1485.

It has been postulated that barbiturate psychosis may result from dream suppression from continued use of a hypnotic drug that decreases the duration of REM sleep.⁸³ Psychiatrist Harry C. Solomon of Harvard Medical School found that many patients over fifty years of age came to him with the problem of mental confusion. Solomon discovered that these patients would regain their lucidity when their use of barbiturates was discontinued. Barbiturates have a cumulative effect in older people, probably because the drug is not metabolized adequately. Many elderly people who have thought they had brain damage found that their mental confusion was merely the cumulative result of nightly sedation.⁸⁴

Data have been accumulated indicating that dream experiences may show heightened intensity after withdrawal of a hypnotic drug. Some subjects will report nightmares following this withdrawal; usually the dream material had to do with violence and aggression directed toward the dreamer.⁸⁵

Few studies have been conducted to gather data concerning effects of prolonged use of hypnotics. Kales *et al.* monitored a subject who had a ten year history of Nembutal use for sleep induction. EEG

⁸³Current Research on Sleep and Dreams, p. 43.

⁸⁴Gay Gaer Luce and Julius Segal, pp. 147-148.

⁸⁵Anthony Kales *et al.*, p. 337.

findings prior to withdrawal showed a very decreased level of stage I-REM and an absence of stage IV sleep. The subject reported dreaming rarely, only one or two times a year. As the Nembutal was slowly withdrawn, REM sleep increased sharply and the patient began to report several frightening nightmares. Stage IV sleep did not begin to reappear in the subject's EEG pattern until close to the end of the withdrawal period. Four months after withdrawal the patient's sleep patterns had returned to normal.⁸⁶

It can be seen from this data that indiscriminate use of soporifics can interfere with the normal sleep patterns and stages of the individual. These altered sleep and dream patterns may play a role in accidental over-dosage and attempted suicides.⁸⁷ This data does lend much support to Long's statement, "Obviously, good judgement is necessary in carrying out the orders for sedatives to be given h.s., p.r.n."⁸⁸

THE INDIVIDUALIZED APPROACH TO SLEEP

Luce and Segal state, "The meanings of sleep are as varied as the human personality, and even when they are denied outright by the conscious person they seep into the habits and ritual of his everyday

⁸⁶Anthony Kales *et al.*, p. 340.

⁸⁷Anthony Kales *et al.*, p. 340.

⁸⁸Barbara Long, p. 1898.

life."⁸⁹

Even though it may be highly inconspicuous, nearly all of us perform some routine which embodies unspoken or even unrecognized feelings, and without these pre-retirement routines it may be hard to sleep. These routines may be the bedtime ablutions of washing, bathing and brushing our teeth.⁹⁰ Or the routine may involve putting out the cat, locking the door, saying our prayers or indulging in a rich bedtime snack.

According to Levine, "The usual sleep habits of the individual are important information for his nursing care, and the closer his usual pattern is approximated, the less likely that he will have a sleep disturbance."⁹¹ So, in the interest of promoting sleep, it is certainly logical to view each hospitalized person as an individual with habits and routines which are unique to him alone.

Abdellah and Levine found that patients want to be treated as individuals and want their care personalized. Hospitalized persons wish to be involved in their nursing care and particularly expressed a need to communicate their individual needs to the nurse. Abdellah and Levine also found that, when nursing care meets the patient's

⁸⁹Gay Gaer Luce and Julius Segal, p. 17.

⁹⁰Gay Gaer Luce and Julius Segal, p. 29.

⁹¹Myra Estrin Levine, p. 439.

needs in an individualized manner, he reacted to his therapy or treatment in a more positive way.⁹²

A study done by Barbara Gill found that using a nursing approach which supported individual pre-retirement routines aided patients in resting during their hospital stay.⁹³

In order to utilize an individualized approach to promote sleep, the nurse must involve the patient in his plan of care. He must feel free to communicate with her concerning his usual pre-retirement routine. This communication is not likely to take place if the patient does not perceive the nurse as an interested, helping person.

⁹²Faye S. Abdellah and Eugene Levine, "What Patients Say About Their Nursing Care," Hospitals (Chicago: American Hospital Association, Volume 31, No. 21, November 1, 1957), p. 48.

⁹³Barbara P. Gill, "A Nursing Care Approach for Promotion of Natural Sleep in the Hospitalized Individual," (unpublished Master's Thesis, Montana State University, 1970), pp. 49-50.

Chapter 3

METHODOLOGY AND ANALYSIS OF DATA

Methodology

The subjects for the study consisted of adult patients admitted to the medical wards of one hospital in Montana. The investigation and data collection were carried out during January, February, and March of 1971.

The design for the study was experimental in nature, utilizing control and experimental groups. The investigator originally hoped to match the two groups for age, sex, and medical diagnosis but this proved impossible due to the limitations of time and availability of sample subjects. Ultimately the investigator was only able to match the control and experimental groups for sex and an age range of no more than five years.

A modification of a data collection tool designed by Barbara Pou Gill, RN, was utilized to collect data concerning the patients' sleep habits. Each week, the investigator obtained a list of the newly admitted medical patients. She visited these patients on their admission day and during the course of the conversation, she was able to elicit information concerning their sleep habits. Medical diagnoses were obtained from the patients' charts. The patients were not told the investigator was doing a clinical study. The investigator eliminated

from the sample population those subjects who routinely took sleeping medication at home, surgical patients, acutely ill or uncomfortable patients, and those subjects whose occupations required they work nights or rotating shifts. All the subjects selected for the study were rational, coherent, and able to communicate with the investigator.

The target population for the study consisted of twenty patients divided into a control group of ten and an experimental group of ten. Beginning with their admission day, one to three patients were selected and matched for the study. The patients were included in the study for three nights a week for a total of ten weeks. Each week new patients were selected. The experimental group received the individualized nursing care approach designed for the study in which the investigator provided all their nursing care prior to their retirement. The control group received the routine bedtime nursing care which was administered by the nursing staff.

The experimental group received the individualized nursing care approach consecutively for three days. During this time the investigator made daily visits to both groups of patients and obtained their subjective evaluations (reported in terms of "well", "fair", and "poorly") of how they had slept. All the study patients' charts were also checked daily for three consecutive days to note if sleeping medication had been taken.

Analysis of Data

To analyze and compare the data of the experimental and control groups, the investigator constructed a table containing the number of nights sleeping medication had been taken by all the patients and the number of nights the patients had reported they had slept "well", "fair", and "poorly". Due to the small sample size, no statistical interpretation was attempted on the data. Table 1 (see following page) shows the comparative data for the two groups.

The ten subjects in the experimental group were included in the study for a total of thirty nights. Out of these thirty nights, the patients reported they had slept "well" a total of nineteen nights, slept "fair" a total of seven nights, and slept "poorly" a total of four nights. They took sleeping medication six out of the thirty nights.

The ten subjects in the control group were included in the study for a total of thirty nights. Out of these thirty nights the patients reported they had slept "well" a total of twelve nights, slept "fair" a total of eleven nights, and slept "poorly" a total of seven nights. They took sleeping medication twenty-four out of the thirty nights.

Two patients in the experimental group took sleeping medication. The investigator noted that both Mr. R. and Mrs. J. were anxious, more so than the other patients. They expressed much concern about their health and they verbalized worry about insomnia.

Table 1

Number of nights sleeping medication was taken and number of nights patients reported sleeping "well", "fair", and "poorly".

Experimental Group		Control Group	
Subject	No. of nights sleeping medication taken	No. of nights sleeping medication taken	No. of nights patients reported sleeping:
	well	fair	poorly
Mrs. T.	0	1	2
Mrs. M.	0	3	0
Mrs. P.	0	2	1
Mrs. K.	0	3	0
Mrs. B.	0	2	1
Mrs. H.	0	3	0
Mr. R.	0	1	1
Mrs. J.	3	1	1
Miss M.	0	3	0
Mr. R.	3	0	2
Total		6	7
Total		19	4
Total		24	11
Total		24	7

Mr. R. exhibited some anxiety that was related to the nursing approach. He seemed to think that the presence of the investigator indicated that he was being closely observed or supervised. In the investigator's opinion, the individualized nursing approach may have heightened his anxiety. But by meeting his need for more privacy, the investigator felt she gained his acceptance.

One incidental finding of the study showed that the majority of the time, the nurses' records coincided with the patients' subjective evaluations of how they had slept.

As previously stated, statistical treatment of the data was not feasible due to a small sample size. On the basis of numerical comparison between the two groups, it was shown that the experimental group subjectively reported they had slept well more often than the control group.

In view of the investigator's inability to control many essential variables, she was unable to make a positive statement attesting to the validity of the findings. But it did appear they indicated support for the two hypotheses.

Sometime during the study all the ten patients in the experimental group verbally expressed gratitude to the investigator for her "extra time", "personal attention", or "special interest" in them. The investigator felt this indicated that the individualized nursing care approach which allowed and assisted patients to maintain as near as

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possible their accustomed pre-retirement routine did facilitate the nurse-patient relationship.

Chapter 4

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to test an individualized nursing care approach designed to promote sleep and decrease the use of sleeping medication in the hospitalized person.

The sample population consisted of twenty patients divided into two groups of ten. The design for the study was experimental in nature, utilizing a control and an experimental group. Due to limitations of time and availability of sample subjects, it was only possible to match the study subjects for sex and an age range of no more than five years.

Patients in the experimental group received the individualized nursing care approach for three days consecutively. During this time, all their nursing care prior to retirement was provided by the investigator. Patients in the control group received routine bedtime nursing care which was administered by the nursing staff. The investigator visited the patients in both groups daily for three days to obtain their subjective evaluations of how they had slept. She also checked the subjects' charts to note if they had taken sleeping medication during the time the study was conducted.

Conclusions

The conclusions of the study were based on a non-statistical,

numerical comparison of the data. In view of the limitations of the study, the investigator could not attest to the validity of the findings, but they indicated support for the two hypotheses which were:

1. Patients receiving the individualized nursing care approach designed for this study will subjectively report having slept better than patients not receiving the approach.
2. Patients receiving the individualized nursing care approach designed for this study will take less sleeping medication than patients not receiving the approach.

Because of the small sample size, no generalizations could be made. However, the conclusions seemed to imply that planning nursing care around the individual patient's needs had benefit for the patient in that it assured him of the nurse's interest and seemed to convey the image of the nurse as a helping person.

Recommendations

After reviewing the findings of the study, the investigator made the following recommendations:

1. If this study should be replicated, the nursing care approach utilized for the control group should be as specifically defined as was the experimental approach in order to strengthen the design of the study.

2. A study could be done to compare patients' subjective evaluations of the quality of their sleep during and following hospitalization.
3. A comparative study could be done to determine if the approach of offering sleeping medication to a patient will influence his decision to take it.
4. A study could be done to determine if there is a correlation between the patient's anxiety level and his use of sleeping medication.

APPENDIX

DATA COLLECTION TOOL

Name _____ Age _____

Medical Diagnosis _____

What time do you usually go to bed? _____

Do you commonly take medicine to help you get to sleep? _____

What kinds of activities do you usually do before going to bed? _____

Table 2

Summary of Data Gathered

Experimental Group					
Subject	Age	Medical Diagnosis	No. of nights in study	Usual bedtime hour	Usual pre-retirement activities
Mrs. T.	57	Rule out Duodenal ulcer	3	10	Watch TV, read
Mrs. M.	82	Hypertension	3	10	Bathe, read
Mrs. P.	49	Gall bladder disease	3	11-12	Watch TV, read
Mrs. K.	46	Back and leg pain	3	11	Bathe, read
Mrs. B.	61	Vertigo, hypertension	3	10	Snack, nothing special
Mrs. H.	71	Foreign body in esophagus	3	10	Read, watch TV, snack
Mr. R.	68	Hypertension	3	11	Snack, read
Mrs. J.	34	Duodenal ulcer	3	12	Watch TV
Miss M.	50	Hypertension, obesity	3	10-11	Sew, read
Mr. R.	39	Fever, undetermined origin	3	11	Watch TV
Control Group					
Subject	Age	Medical Diagnosis	No. of nights in study	Usual bedtime hour	Usual pre-retirement activities
Mrs. P.	56	Thrombophlebitis	3	11-12	Watch TV
Mrs. L.	88	Pneumonia	3	9	Read
Mrs. T.	52	Colitis	3	11	Watch TV, read
Mrs. B.	45	Bronchitis	3	12	Read, snack, watch TV
Mrs. G.	62	URI	3	11	Watch TV, bathe
Mrs. W.	67	Gall bladder disease	3	10	Read the Bible
Mr. D.	68	Arthritis, hypertension	3	11	Watch TV, shower
Mrs. B.	33	Back pain	3	11-12	Watch TV, snack
Mrs. M.	50	Cholecystitis	3	10	Nothing special, bathe
Mr. M.	41	Jaundice	3	11	Visit, watch TV

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