

DIFFERENCE IN PERCEPTIONS BETWEEN NURSES AND PATIENTS
CONCERNING SEVERITY OF PATIENT PROBLEMS

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CHAPTER 1

INTRODUCTION

Individuals who encounter the health care system are largely dissatisfied with the care they receive. Health care in the United States has been characterized by a "traditional" attitude which encompasses a close patient-physician relationship (Walker, 1975). But as the availability of General Practitioners has decreased and people have become more mobile, many individuals and families are unable to reach a physician in their moment of perceived need. Because they see hospitals as their constant source of health care, consumers are turning to the nearest health care facility to solve medical problems of varying severity.

The health professional tends to view a health care facility, i.e., the hospital, in the role for which it was originally planned; a facility in which treatment is given to individuals with an illness (Dorland's, 1974). The health professional's concept of a hospital as an appropriate source of care may differ from that of the patient. For nursing, appropriateness may be based on the presenting signs and symptoms of an illness as exhibited by a patient. In contrast, a patient's perception of a hospital as an

appropriate source of care is influenced by many factors. Some of these factors include availability of health care facilities, knowledge about health care facilities, convenience, and previous experiences with the health care system (Stratman & Ullman, 1975). Hospitals and hospitalization also carry special meaning depending upon the age and occupational status of the patient. The range of responses to hospitalization vary with each individual patient.

No two patients view illness in the same way. People perceive things according to their predominant needs, motives and emotional states. The patient's perception of illness, like that of hospitals/hospitalization, is selective and related to a host of internal/external factors. A patient's state of physical and mental health, stage of growth and development, sex, role in family, culture, and so forth, influence what the patient perceives about illness.

The nurse, in reviewing the characteristics of illness, identifies a class of denotable, objective features generally referred to as the "signs" of illness. Thus the nurse's perception of illness is generally more objectively formulated than the patient's perception. However, subjective qualities may also play a role in the nurse's perception. It was the focus of this study to investigate if differences in perception of severity of illness exist between nurse and patient.

Problem Statement

The following problem statement was formulated for this study:

Is there a difference in perception of severity of patient problems between nurses and patients?

Justification of Problem

It can be noted that whether illness is viewed as a "sick process" from a physiological, social or psychological perspective, it is viewed as a condition that elicits a reaction in the patient and in those with whom the patient interacts (Volicer, 1974). The nurse may view a reaction by a patient as inappropriate for the diagnosed disease entity. If a nurse views a patient's illness behavior as an over-reaction to the disease process, the nurse may knowingly or unknowingly deliver care in a cold impersonal manner, or may even seek to ignore many of the patient's needs (Weiner, 1975). Weiner (1975) observed certain nursing staff behavior when assessing pain on an orthopedic ward. Staff members would signal their approval or disapproval of requests by patients for pain medication by facial expressions and body posture. When pain expression was perceived to be excessive, the nurses would verbalize explicit statements that whimpering and loud moaning were not acceptable behavior. However, the patient may

be unable or unwilling to change the illness behavior to coincide with what he/she feels the nurse expects. Therefore a conflict of expectations of behavior is likely to arise between the patient and those caring for him/her.

Conflict may also develop as a result of varying interpretations of illness. Nyberg (1978) was impressed by the frequent verbal conflicts between nurses and patients in a busy metropolitan emergency department. As the daily patient load increased, so did tension; patients had to wait for service, and the staff struggled to meet needs which ranged from minor to serious. Except in the very critical cases, the patients seemed unaware of the difference in the severity of problems; each perceived his or her problem to be at least as severe as that of anyone else. Nyberg (1978) further observed that some physicians and nurses showed sincere interest in all types of patients, but others were curt and unkind to anyone they believed did not need emergency care. It is of interest to the nursing profession to pursue investigations into areas of patient-nurse conflict. Conflict between nurse and patient may develop as a result of varying perceptions and/or interpretations of illness. Those interpretations of illness and its degree of severity offered content for this study.

Theoretical Framework

Theories of perception attempt to explain why things and events appear as they do. Perceiving is phenomenological: that is to say, the act of perceiving is private (Allport, 1955). Koos (1960) observed that "perceived seriousness of symptoms was an important determinant of illness behavior" (p. 14). A 1973 study of the concepts of health and illness concluded "illness behavior is limited to those 'help-seeking' behaviors that seek to identify and assess changes associated with the experiences of illness" (Wu, 1973, p. 155).

Nurses are concerned with illness behaviors that are directed towards the identification, alleviation and ultimately the prevention of illness. The nurse as the investigator of illness cannot encounter the same discomforts as the patient who is presently ill; these discomforts are privately experienced and are known only to the person experiencing them.

A nurse bases care on an assessment of the individual's behavioral response to the subjective and objective changes experienced during an illness. It is the assessment that provides the nurse with signs and symptoms which then enables the nurse to perceive the severity of the patient's problem.

Perception by the patient concerns his/her own concept of the illness and the meaning it has for him/her in terms of what is known, seen, and felt. It has been said that "illness behavior is elicited in response to cues associated with illness for the purpose of defining a state of health and discovering a suitable remedy" (Wu, 1973, p. 155). According to Mechanic (1962) the most important determinant of illness behavior is the nature of the symptoms. For example, the intensity, quality, and persistence of the discomfort would determine the illness behavior. What is needed is a theory to explain under what conditions aberrance is perceived. Floyd Allport's Theory of Perception (1955) offers such an explanation. According to Allport there are six different but related ways in which things appear to seem to appear. These six components of perception are categorized as follows: (1) Sensory Quality, (2) Frame of Reference, (3) Perceptual Constancy, (4) Configuration, (5) Concrete Object Character, and (6) Perceptual Set. The following paragraphs describe Allport's (1955) six components of perception and their relevancy to illness.

The Sensory Quality of an experience occurs by means of receptors. They are of two types: exteroceptors and

interoceptors. Exteroceptors include the organs of reception for vision, smell, hearing, and taste. Interoceptors include those receptors for pain, touch, cold, warmth, and pressure. It can also be experienced as pain, heartburn, fever, nausea, and so on. The Sensory Quality of things and events tells the individual how things and events appear by their intensity, duration, and how they are felt by the body (Allport, 1955). A headache, for example, may be of low intensity for one individual and not interfere with daily activities but may be so intense for another as to make it impossible for that individual to tolerate a light on in the room. The intensity or duration of a sensation can be estimated with reference to some objective standard.

The Frame of Reference is the act of comparison of a current sensation versus an individual's past experiences with that or similar sensations (Allport, 1955). A patient who has never experienced the sensation that he/she is now perceiving will encounter difficulty judging its dimensionality. He/she has no standard, i.e., no Frame of Reference, from which to judge. If the patient encounters someone who is suffering the same illness or who is facing the same operation, he/she may use that person's experience to evaluate whether his/her own suffering is greater or

lesser than "normal." The Frame of Reference for a primigravida patient in labor might be quite different from that of a multigravida patient in labor. The multigravida patient will rely upon past experiences to confirm her perception of labor, i.e., the Perceptual Constancy.

When a sensation or phenomena is experienced, an individual attempts to confirm an experience by relying upon the presence of cues previously associated with the percept, the thing or things being perceived (Allport, 1955). Perceptual Constancy entails clues given by illness and/or by the surrounding environment which helps an individual recognize an experience as an illness. When the sensation is the same as an individual's idea of illness, he/she will decide that he/she is ill and engage in behavior that is congruent with his/her perceptions. Thus, recognition of illness is made when the cues experienced agree with past experiences. Familiarity due to perceptual constancy can minimize or increase the fears associated with illness. An individual with a past history of myocardial infarction (MI) may associate the sensation of "heartburn" with suspicion of another MI. Whereas another person may not be aware that his/her "heartburn" and "gassy" feelings are anything but occasional stomach complaints. He/she associates these symptoms with previous

past experiences and is not aware they are really signs of cardiac instability. Failure to recognize the thing being perceived (the percepts) may be due to lack of past experiences with the event or even to the need to deny the presence of familiar cues.

Configuration refers to the overall form or shape of the thing being perceived. It implies interrelatedness, meaning the parts or elements that make up the configurations are interrelated and interdependent. "The existence or action of each part affects other parts in lawful ways" (Allport, 1955, p. 83). It is known that illness is made up of many factors such as deviations from normal structure and/or function in the body. The content of each part varies from illness to illness. Thus, the problem may be a gastric ulcer or a fractured spine, the incapacity may be minimal or may be as severe as total immobilization, the incidence may be frequent or seldom, and the prognosis may be good or poor in nature. However, the relationship between the parts (bodily systems) remains the same regardless of the change in content. The Configuration of an illness is multivariant and its impact on an individual is dependent upon multi-processes within the individual. A fractured spine involves not only the nerve and bone structures surrounding the injury but also manifestations of bowel, gastric and tissue abnormalities due to all of these body

structures being interrelated. Psychological and sociocultural dysfunctions may develop as a result of the interrelationship to the physiological functions.

Recognition of the Configuration of illness aids in the understanding of the meaning, i.e., the Concrete Object Character of illness. Concrete Object Character refers to the meaning attached to objects and events. Perception almost always carries with it an awareness of the identity and character of what is being perceived (Allport, 1955). The male associates the chest with ideas of virility, strength and endurance. The female, on the other hand, associates the chest with the breast and attitudes of femininity and maternal feeding. Illness associated with the chest or reproductive organs may mean a loss of sexuality, femininity, or masculinity.

Perceptual Set is in contrast to the other five variables by reason that it exerts a selective influence on the kind of sensory quality and meaning given to a phenomena (illness). It is described by Allport (1955) as the tendency to perceive phenomena in a certain way. The perception of illness is selective and determined. The individual hears and sees only what he wants or what he is prepared to hear or see. The physical and emotional states of the organism determine not only, but also how, things

are perceived. Age, sex, race, occupation, and religious affiliation are other variables that influence perception (Allport, 1955).

In sum, these five variables--Sensory Quality, Frame of Reference, Perceptual Constancy, Configuration, and Concrete Object Character--exemplify the characteristic ways of perceiving. What is perceived is determined by the sixth variable, Perceptual Set. In viewing this theory of perception, it can be concluded that perception can be totally subjective, objective, or a combination of the two. Allport's theory was selected to illustrate the problems that arise when two or more individuals make a judgment concerning severity of an illness based on their perceptions. Thus, an individual, whether nurse or patient, will perceive in accordance with their needs, motives, attitudes, and preoccupation.

Assumptions

The following assumptions were applicable to this study:

1. Both nurses and patients have perceptions about illness and its severity.
2. The formulation of perception is based on a variety of objective and subjective factors.

Hypotheses

For the purpose of this study, the following hypotheses were proposed:

1. Nurses and patients will differ in their perceptions of the degree of threat to life represented by patient problems.
2. Nurses and patients will differ in their perceptions of maximum delay of physician contact in treating patient problems.
3. Nurses and patients will differ in their perceptions of severity of patient problems.

Definition of Terms

For the purpose of this study, the following terms were defined:

1. Nurse--any individual with a diploma, associate degree, or baccalaureate degree in nursing who is licensed to practice nursing in the state of Texas.
2. Patient--an individual undergoing hospitalization in the 300 bed hospital specific to this study for the treatment of a diagnosed illness.
3. Perception of illness--an individual's awareness of illness; the conditions and events about and surrounding him/her and the meaning or recognition given to the

illness. Perception of illness is measured by degree of threat to life, maximum delay of physician contact and severity of patient problem on the perception of illness questionnaire (Appendix A).

Limitations

The limitation of this study was as follows:

The use of voluntary participants and a convenience sampling technique limited the generalizability of the results to the sample under study.

Summary

Theories of perception attempt to explain how events/illness appear to individuals. The nurse is concerned with illness and care toward the identification, alleviation and prevention of illness. The nurse bases care on an assessment of an individual's behavioral response to illness, and it is the assessment that enables the nurse to perceive severity of a patient's problem. The patient perceives illness according to his/her concept of illness. The concept of illness has meaning for the patient in terms of what is known, seen, and felt. No two individuals will perceive events/illness in the same way. This study was designed to determine if perceptual differences exist between patients and nurses concerning severity of illness.

Chapter 2 presents a review of the literature.

Chapter 3 presents the methodology in implementing this study. The analysis of data obtained from this study is presented in Chapter 4. Finally, Chapter 5 offers a summary of the study including recommendations for further research.

CHAPTER 2

REVIEW OF LITERATURE

In this chapter, the literature is reviewed as it relates to the area of inquiry under study. Those topics significant to perception of illness are identified and expanded in the following order: the concept of perception, the concept of illness, the perception of illness, and the perception of treatment and hospitalization.

Concept of Perception

Many theorists have sought to examine and define perception in an effort to discover why differences in perception exist. There are as many theories as there are theorists. Perception has been viewed as a cognitive process, an action, a product, and as a response. What then exactly occurs with perception? Two observers may respond very differently to the same event even though it confronts their senses equally. Solley and Murphy (1960) believed such differences may arise because the two observers have not had the same history of perceptual learning. The authors further believed this factor is most clearly evident in reading and/or listening to a speech. For example, an individual can look at this page

with no intention to read it at all; one can skim it with the intention of extracting its meaning, or one can read this page to correct any grammatical mistakes. The same page of text results in different perception, depending on how attention is deployed. Solley and Murphy (1960) refer to perception as an inferred process. The process of perceiving leads to the "product of perception." Perceiving as a process is met under certain conditions and not under others. These inclusions and exclusions are necessary to distinguish perceiving from other cognitive processes, such as memory, judgment, and thinking. This process of perceiving is a psychological process with parallel physiological events. The process of perception according to Solley and Murphy (1960) consists of a series of interdependent subprocesses or stages. These stages are referred to as the Perceptual Act. The first stage, expectancy, is preparatory in nature. The second stage, attending, involves the moment before stimulation occurs. The third stage is the content of perception, such as the colors an individual is capable of seeing, the odors an individual may smell, and the sounds an individual is capable of hearing. The fourth and fifth stages are trial and check and consolidation of the stimulus, respectively. In sum, the perceptual act begins before stimulation; it

begins with the individual's expectations about future perception. Perception, as an act, ends with conscious perception.

Helmholtz (1962) referred to a process of perception that involves cognition or as he explained "the psychic acts of ordinary perception by which percepts are achieved" (p. 95). The process of perception begins with actions based on calculations that are performed on other perceptions. For example, starting with the simplest of sensory elements, he explained yellow as an unconscious mixture of unnoticed red and green sensation and similarly viewed lighting as an unconscious judgment based on our involved perceptions of the illumination. Helmholtz called these "cognitive explanations" because the explanation assumes that our perceptions are based on unconscious mental processes similar to conscious reasoning (p. 95).

Oatley (1979) tended to support a view of perception parallel to Helmholtz' cognitive explanation. Oatley believed that the nature of perception is a process and that it is an interpretive task requiring a complex and intelligent inference system. He pointed out that "the way we see is in terms of our human purposes in the environment" (p. 166). He discounted theorists such as Gibson (1966) who claim that the perceptual experience is

direct and flows immediately from what he calls the higher order variables in the visual display, i.e., particular patterns of retinal stimulation that elicit a response.

According to Piaget (cited by Maier, 1965), perception is a neurological experience with no psychological relevance until an individual intellectually incorporates his/her perceptual experience. In short, only as an individual recognizes his/her perceptions do they have any meaning to him/her, however realistic or distorted his/her awareness may be (Maier, 1965).

Growth and progress in perception is influenced both by maturation and by learning (Jersild, 1968). Perception is reinforced by the ability to recognize likenesses and to discriminate differences. For instance, a child's likes, dislikes, expectations, and fears may influence his/her judgment of the relative size and importance of things and events (Berlyne, 1960).

Erikson (1950) recognized perception as part of a person's experience from birth, while Sears (cited by Maier, 1965) described perceptual processes only for their stimulation. Maier (1965), in studying these theorists, discovered that all the theorists agreed that selective perception is an essential human quality based upon a combination of different developmental experiences and readiness.

Hochberg (1978) has outlined some conditions for inferring perception which were established by Garner, Hake, and Erikson (1950). It was universally agreed by these authors that a physical stimulus must be present and excite some sense receptor before perception occurs. A sense receptor may be stimulated without perception occurring but perception never occurs without prior sense receptor stimulation. It is further agreed that perceptual traces last for a short time after removal of a physical stimulus; they change into a memory and then the continuous presence of the physical stimulus makes it more likely that one is dealing with perception.

Many theorists of perception admit to borrowing their concepts of perception from those established by Floyd Allport (1955). Allport recognized that this is a world of objects which might have uses that fit within the purpose of people with whom we might interact. It is a world of possibilities for action described by individuals and seen by individuals in terms of the way the individual interacts with the world. It is Allport's theory of perception that enabled a framework for this study on the perception of illness. Allport's theory provided a scientific procedure which provides a means to view illness. The perception of illness is not only concerned

with how illness appears to the individual experiencing it but also with what is observed from a scientific assessment. The scientific procedure outlined by Allport establishes a mechanism for careful description suitable for an explanation or prediction of elicited illness behaviors. These methodological rules have been developed to insure maximum objectivity in the description of all phenomena and in the study of illness. These rules as developed by Allport are as follows: (1) "Observer Detachment" refers to the degree of observer-involvement. In any scientific procedure it is necessary that an observer separate his preconceived notion, biases, and interpretation from his own observing activities and record only what he observes. (2) "Denotability" is the ability to physically contact or encounter some aspect of the event or object under study. The more data obtained from denotable sources, the greater will be the assurance that the description is objective and free from observer involvement. (3) "Publicly Performable" means the operation employed to describe the event should be capable of being duplicated by another person. Any study to be of scientific repute must be capable of replication by other experts in the field (Allport, 1955). Allport's theory of perception provides the scientific method to obtain denotable, objective data

with minimal observer bias. Incorporated into the scientific theory are the features that explain how the phenomenalist or subjective features of perception occur.

Allport (1955) described six different but interrelated ways in which things or events appear or seem to appear:

- (1) "Sensory Quality" of an experience occurs by means of receptors that develop into sensations. These sensations have four dimensions: extension, intensity, duration, and clarity.
- (2) "Frame of Reference" is the act of comparison of a current sensation, i.e., the intensity or duration with reference to some objective standard.
- (3) "Perceptual Constancy" entails clues given by an experience which helps an individual recognize it as an experience already encountered.
- (4) "Configuration" refers to the overall form or shape of the thing being perceived. It implies interrelatedness, meaning the parts or elements that make up the configuration are interrelated and interdependent.
- (5) "Concrete Object Character" refers to the meaning attached to objects and characteristics of what we are perceiving.
- (6) "Perceptual Set" is different from the other five variables meaning that it exerts a selective influence on the kind of sensory quality and meaning given to a phenomena. It is "the tendency to perceive phenomena in a certain way" (Allport, 1955, pp. 17-20).

Whether perception is viewed as a cognitive process, an action, a product, or as a response, perception is said to have something to do with man's awareness of objects, conditions, and events about him. Perception is more than sense impressions, more than the ways things and events look, feel, taste, sound, or smell. Perception also includes the meaning or recognition given to objects and events. "An individual's perception and concerns will have a direct relationship to the experience of well-being" (Berg, Hallauer, & Berk, 1976, p. 391). The quality of well-being differs from individual to individual. The basis upon which things or events can be classified as illness may also differ. The review of the literature continues with an examination of the concept of illness.

The Concept of Illness

Suchman (1963) suggested that in order to define illness it would be useful to distinguish between the words disease, illness, and sickness. The author referred to the medical entity that is defined as disease in terms of biological and physiological functioning. Illness is referred to as a social entity, a status that is defined in terms of social functioning. Sickness refers to the reaction of the individual in terms of his/her own feelings and the reaction of others toward his/her illness. In other words,

Suchman distinguished between a disease process, an illness condition, and a sick role. As suggested by Suchman, illness from the medical perspective is viewed as a process, whereas illness from the sociological perspective is viewed as a status, and illness from the psychological perspective is viewed as something that elicits a reaction both in the patient and in those with whom he/she interacts.

Wu (1973) abstractly described illness as "an event or happening that offers content for scientific observation and study, i.e., an experience that evokes a certain class of behaviors" (p. 6). Illness viewed as an abstraction does allow nurses to recognize that an individual may consider illness to be either a disease process, a position in society with certain expectations, or even as a punishment for wrong doing. The problem that confronts nursing, according to Wu (1973), is to identify the basis upon which things or events can be classified as illness. A review of the literature dealing with the concept of illness reveals four different but overlapping perspectives of illness: an historical perspective, a medical-physiologic perspective, an equilibrium-homeostasis perspective, and a social perspective. A discussion of the onset of illness follows.

Historical Perspective

During primitive times, illness was seen as an autonomous force or actual being that attacked humans while trying to dominate or kill them. Humans were viewed as passive agents who had no power to defend themselves. Magical and ritualistic practices were developed by the population to try to appease the evil spirits with the hope of driving the illness away (Dubos, 1965).

Throughout the Babylonian-Assyrian, Greek, and Roman civilizations and into the Middle Ages, there existed a holistic approach to disease in human beings. This approach recognized the importance of the interrelationship of mind and body. The nature of the mind-body interrelationship was, however, in keeping with the cultural and religious beliefs of those times. During the Middle Ages the idea of illness as an autonomous being was displaced by the mystical concept of sin as the cause of all problems (Luckmann & Sorensen, 1980). Illness was felt to be a punishment for committing a misdeed or sin. Confession of sin, prayer, supplication, and faith in God was the only way healing could be achieved. The common discomforts such as constipation and colds were accepted as part of one's existence, but the more serious and disabling conditions were attributed to the work of a demon or wrath

imposed by an offended God. Further support for the demonic concept of illness came with the discovery of bacteria. With the invention of the microscope, the demon could actually be seen in the form of a germ that attacked and killed its prey (Dubos, 1965).

Later during the Renaissance period, the "mind" and "body" were separated into a dichotomous model as conceived by Rene Descartes (Luckmann & Sorensen, 1980). For Descartes, mind and body were two unrelated, distinct entities. Each was subject to different laws of operations and principles of causality. Descartes' model made a tremendous impact on Western thought at that time regarding humanness. When Freud postulated the unconscious element of human mental life, Descartes' dualism model was destroyed. Freud's work led to the increased awareness of the importance of emotions in producing mental and physical imbalances (Luckmann & Sorensen, 1980).

Medical-Physiologic Perspective

Hippocrates, who early in ancient history postulated a medical-physiologic approach to illness, had no patience with the idea that disease was a punishment sent by the gods. He postulated that every disease had its own nature; that mind and body are both involved in illness and that

illness arose from external causes as opposed to supernatural (Luckmann & Sorensen, 1980).

Discovery of the scientific method with its emphasis on making direct, objective observations in contrast to speculative assessments resulted in a concept of illness based upon anatomic changes in the cells, tissues, organs, and so forth. In short, illness was conceived to be an organic phenomenon. Illness can then be viewed as some underlying defect or structural aberration that must be identified, prevented, removed, counteracted, neutralized, or corrected. Illness is biologically determined by such agents as bacteria, toxins, and viruses. Efforts are directed toward discovering signs that fit into the frame of a medical classifying schema. The signs of illness determine its severity. Severity of illness is a function of the aggressor or disease-producing agent as opposed to the body's resistance. The observation and recording of different responses to similar disease-producing agents was attributed to individual idiosyncracies (Wu, 1973). The emphasis of the medical-physiologic perspective is on the directly observable and measurable manifestations of illness.

Equilibrium-Homeostasis Perspective

The equilibrium-homeostasis perspective views illness as a reaction of the whole organism--biological and

psychological. This perspective maintains that "human beings are more than and different from the sum of their parts, man acts as a whole; one cannot view man's mind apart from his body" (Rogers, 1970, p. 46). The interactional process between the individual and the environment is subject to constant change. When the proper balance between the individual and the environment is upset, "certain processes in the organism develop in a manner prejudicial to its life" (Menninger, 1963, p. 401). This imbalance between the aggressive or self-destructive forces and the constructive forces represent illness. Illness reflects a failure of the body's adaptive self-regulatory powers to maintain balance in the face of stress, physical and emotional, that may arise from inside and outside of the organism.

Bernard and Cannon (cited by Luckmann & Sorensen, 1980) saw the human organism not as being apart from its environment but rather as an integral part of the environment. Both theorists hypothesized that if an organism is to live it must have the capacity to maintain its internal environment (internal milieu) in a relative state of constancy. Bernard argued that sickness was the result of: .
(1) imbalances in the internal environment of the body,
and (2) a break in the vital communication that must exist between the internal and external environment of the body. Cannon's (1939) use of the term homeostasis applied mainly

to the self-regulation of such internal physiologic processes as blood sugar concentration, blood pressure, pulse rate, and body temperature. Cannon was more concerned with the body's ability to satisfactorily regulate itself than with breakdown in physiologic processes. In particular, Cannon explored the fight-or-flight reactions of the body to emergency situations and the nervous and adrenal mechanisms involved in those reactions (Ingelfinger, 1978).

The equilibrium-homeostasis perspective views illness as a failure of the body's self-regulating powers to maintain the constancy of the internal milieu. In addition, it represents an imbalance in an individual's physiologic adaptation to physical and emotional stress (Ingelfinger, 1978). The relevant attributes according to this perspective are the signs and symptoms of illness that are manifestations of an imbalance. Intervention is directed towards encouraging, nurturing, reinforcing, and strengthening behaviors that will restore the balance.

Sociological Perspectives

The sociological perspective views illness as "an impairment of the capacity to perform one's social roles and/or valued tasks relative to one's status in society" (Paskel, 1977, p. 176). Illness is a social phenomena that

disrupts regular patterns of living. The sociological perspective defines illness in terms of the social position or roles an individual is expected to occupy or play. The three perspectives already discussed explain illness in terms of causality, physical manifestations, and consequences to the individual's stability. This perspective focuses on the consequence of the impaired condition to society.

Hadley (1964) defined illness in a social perspective:

A status in which there is a disturbance in one or more spheres of an individual's capacity to meet minimum physical, physiological, psychological, and social requirements for appropriate functioning in the given sex category and at the given growth and developmental level. (p. 16)

The criteria for measuring minimum requirement for appropriate functioning utilize the variables of sex, age, growth, and development. Hadley maintained that certain physical, physiological and psychological behaviors can be expected to appear at different stages of growth and development. The author suggested that if an individual is incapable of performing at the minimal expected level of growth and development, he/she is experiencing an impairment defined as illness. The social definition of illness enables individuals' other than the patient, nurse, and physician to modify the meaning of illness according

to different situations and to the changing needs of the social system.

Not all conditions defined as illness by certain segments of society are recognized as such by individual communities. Sometimes the requirements of the social system will take precedence over purely medical and humanitarian conditions and will provide a different basis for defining illness. For example, the demand of the system may not allow certain persons to be called ill if the economic needs overshadow the demands of the illness (Paskel, 1977). Also, exemption from a social role is not always granted to the ill. Generally, the more serious the prognosis the more likely is the individual accorded the status of illness and the rights and obligations that go along with such a status (Paskel, 1977).

Sweetser (1960) found that average consumers align themselves with the sociological definition of illness. In an interview with 60 well individuals, ages 20 to 50 years, Sweetser discovered that interference with usual daily activities appeared to be the most important condition the consumers associated with illness. For example, if individuals had persistent signs and symptoms commonly associated with illness that failed to limit activity, they did not view themselves as ill. Conversely, older males

in the study defined themselves as "Not Well" (p. 222) when a change in feeling occurred, i.e., the experience of pain and weakness, the incapacity to perform one's normal role, and the appearance of certain changes in the body that were viewed as important to survival and longevity.

In sum, the sociological perspective views illness as an incapacity to perform social roles and tasks. There is no attempt to explain the cause of illness. Recognition is based on a general feeling of not being well plus an inability to perform at the level usually expected (Sweetser, 1960).

Onset of Illness

In studying the types of events that contribute to symptoms of distress and onset of illness, Vinokur and Selzer (1975) found that undesirable events required greater adjustments than desirable ones. Meyers, Lindenthal, and Pepper (1975) reported that events classified as "exits"--representing the "departure of a cherished person or object from the respondent's social field" are more strongly associated with impairment and illness than are "entrances"--"the introduction of a new person into the social field of the respondent" (p. 429). Paykel, Prusoff, and Meyers (1975) found that exits precede depression, but entrances do not.

In studying the areas in life in which the events occur, Rahe (1974) found the following areas as significant: personal, family, marital, occupational, recreational, economic, social, interpersonal, and religious. In an ongoing epidemiological survey of patterns of illness onset on Navy ships, Rubin, Gunderson, and Arthur (1971) identified the following demographic variables as having a significant relationship to illness rate: job specialty, age, pay grade, length of service, ethnic group, marital status, number of dependents, health status, education, and intelligence level. Results of the study indicated that relatively high illness rates occurred in the younger, unmarried, nonrated, inexperienced crew members. Rahe and Holmes (1975) in studying a group of men who had recently recovered from a myocardial infarction found factors common to the men prior to the infarction. These factors were overwork, job dissatisfaction, home problems, and rushing against deadlines (Rahe, 1974). These researchers suggested that when postmyocardial infarction patients are counseled, emphasis should be placed on reducing stress factors and increasing satisfaction in life as well as attention to diet, exercise, and smoking.

The time relationship between the clustering of events and the onset of alterations in health status has

been the subject of various studies. In their studies of telephone workers over a 20 year period, Hinkle and Wolff (1957) found that the great majority of illnesses tended to occur in clusters when the subjects perceived their lives as unsatisfying, threatening, overdemanding, or conflictual and felt they could not adapt. Holmes, Hawkins, and Bowerman (1957) studied employees of a tuberculosis sanatorium who developed tuberculosis during their employment. They retrospectively examined the lives of their subjects with respect to certain life-change events, and found, like Hinkle and Wolff (1957) that life-change events tended to cluster in the 12 to 24 months preceding the onset of tuberculosis. No such clustering occurred in the healthy control group. In a longitudinal study of life change and illness, Rahe, McKean, and Arthur (1967) studied the health records of 50 Navy and Marine personnel disabled from the service for psychiatric illness. The investigators found that both life change and physical illness clustered during certain years. The cluster years of life change occurred immediately prior to the clustering of illnesses, and the greater the magnitude of life change, the greater the severity of the illnesses. Two instances of death and one instance of near death were preceded by clustering of increased life change events (Rahe et al., 1967).

Since the first study by Holmes and Rahe (1967) life change events have received important considerations as to their intensity and relationship to illness and illness onset. Other psychosocial variables also deserve consideration and are relevant to the concept of illness onset. Urbanization and city life seem to be related to increased stress and illness. Christmas (1973) concluded that city life contributed to undue stress and exposed people to repeated traumatic experiences. Croog, Lipson, and Levine (1972) reviewed studies done over the past 30 years that showed universally, populations in small cohesive countries have low blood pressure compared with Western industrialized countries. In another study involving Zulu tribe populations, it was found that blood pressure was higher in urban than in rural dwellers among the tribe members (Scotch, 1963).

Social status, education, and varied life situations are important psychosocial factors in regards to their intensity and relationship to illness and onset of illness. Shekelle (1969) studied social status and its association to the risk of coronary heart disease. He found heart disease to be greatest among men characterized by one or more of the following incongruities of social class: (1) wife's class of origin different from own;

(2) husband's class of origin lower than wife's;
(3) social class of origin different from present social class; and (4) husband's educational status less than wife's. In a Canadian study, 165 employees of an Ontario brewery kept accurate health records and social change records over a five year period. Results showed that a person's subjective appraisal of social change in his life appeared to bear a strong relationship to his illness experiences (Thurlow, 1971).

Sociologic relationships seem to be important psychosocial factors related to onset of illness. Chen and Cobb (1960) reviewed literature on the relationship of illness to family structure and found five categories that seemed to be related. The author admitted, though, that no definitive statements could be made regarding this relationship. The categories included parental deprivation, sibling relationship, positions of sibling relationships, marital status, and number of children in the family. Only one, parental deprivation, was directly associated with disease (Chen, 1960). In a 1974 study that included 1,337 Johns Hopkins' medical students as subjects, predictors of early disability or death from suicide were investigated. Two predictors were found to be important; closeness to parents and father's age at subject's birth (Thomas, 1974).

A great deal of research has been done on occupation, stress, and related psychosocial components to illness onset. Recent studies continue to add to the support of a relationship between occupational stress and heart disease. In a 1970 study of 3,263 longshoremen, results demonstrated that men engaged in physical work seemed to have significantly lower death rates from coronary artery disease than sedentary workers (Paffenbarger, Laughlin, Giman, & Black, 1970). In Sales and House's (1971) study, data were collected and analysis indicated a strong relationship between job satisfaction and coronary heart disease. Many psychosocial variables seem to have relevancy to the understanding of illness and the onset of illness. Urbanization, social status, education, varied life situations, family structure, personality, occupation, and behavior patterns are variables which play an important role in the health and illness status of an individual.

A discussion of the concepts of illness and perception of illness must include a working definition of illness that has relevancy to the nursing profession. Wu (1973) defined illness as:

An event experienced by people that manifests itself through observable and/or felt changes in the body, causing an impairment of capacity to meet minimum physical, physiological, and psychosocial requirements for appropriate functioning at the level designated for the person's age, sex and development or handicapped state. (p. 23)

The Perception of Illness

A growing body of literature, both theoretical and empirical, indicates that there is significant variation in the way people perceive, evaluate, and act in response to the symptoms of disease. DeGowin and DeGowin (1969) referred to symptoms as "an abnormal sensation perceived by the patient" (p. 25). While one person will dismiss a particular symptom as not being important, another will seek prompt medical attention.

Individual reactions to disease symptoms have been termed "illness behavior" (Mechanic, 1962, p. 189). By this term Mechanic (1962) referred to the ways in which given symptoms may be differentially perceived, evaluated, and acted (or not acted) upon by different kinds of persons. He explained:

Whether by reason or earlier experience with illness, differential training in respect to symptoms, or whatever, some persons will make light of symptoms, shrug them off, and avoid seeking medical care; others will respond to the slightest twinges of pain or discomfort by quickly seeking medical care as is available. (p. 189)

Extraneous variables affecting illness behavior come into play before medical scrutiny and treatment but after etiological processes have been initiated. Mechanic (1962) postulated that illness behavior even determines whether diagnoses and treatment will begin at all. The effect of

extraneous variables on perception of illness will be discussed in the following subtopics: illness perception and social class, illness perception and culture, illness perception and religious/familial environment, illness perception and life change, and lastly, illness perception in children.

Illness Perception and Social Class

Previous research has demonstrated that a number of factors are related to illness behavior. In a pioneering study, Koos (1954) asked his subjects to indicate which of 17 symptoms required medical care. With respect to each symptom it was found that upper class persons more often reported themselves ill than lower class persons, and also that they were more likely to seek treatment when affected. Lower class persons on the other hand, while having more symptoms, reported themselves to be less ill and were the least likely of all persons in the community studied to visit a physician. Mechanic and Volkart (1961) in a study of male students at a large university found a similar relationship between social class of the subjects and the expressed inclination to see themselves as ill and to seek medical care.

Anderson, Anderson, and Smedby (1968) reported that in the United States, but not in Sweden, the proportion of

individuals seeing a doctor for health conditions tended to increase as family income, education, and occupational rank increased. Hetherington and Hopkins (1968) discovered that persons with low income were significantly more insensitive to symptoms of illness than those with higher incomes. Saunders (1954) compared the attitudes and behavior of Spanish and English speaking populations in the Southwest. Significant differences were found in the way the two populations responded to illness and used medical facilities. Whereas the Anglos preferred modern medical science and hospitalization for many illnesses, the Spanish-speaking people were more likely to rely on folk medicine and the care and support of the family.

Illness Perception and Culture

Empirical research has attempted to discover and classify the relationship between culture and illness. Flaskerud (1980) postulated that the culture of a group, specifically the Appalachians, influences the labels that the culture places on behavior and illness. Three groups, each consisting of 50 randomly selected respondents (Appalachians, Mental Health Professionals, and lay non-Appalachians) were interviewed to compare the labels each group placed on problematic behavior. Hysterical and promiscuous behavior among women; men with drinking and

violent behaviors; and somatic and withdrawn behaviors were among those compared. All behaviors that the literature supported as normative Appalachian behaviors were given a personality disorder or neurotic label by the mental health professionals and a non-specific mental illness label by the lay non-Appalachians. Interestingly, the Appalachians did not consider these behaviors to be mental illness nor did they recommend psychiatric management of the behaviors. Instead they recommended tolerating or punishing the behaviors. Therefore, the author recommended that psychiatric nursing, in its teaching and practice, recognize cultural diversity and how this diversity indicates differing perception of illness to include mental illness.

Explanations of the relationship between culture and mental illness differ (Flaskerud, 1980). This statement is guided by the explanation that cultures vary as to which behaviors and emotions they consider abnormal or mentally ill. The view is based on a belief system in harmony with a cultures way of life--the technology, social structure, and ideology of a group. Each society selects behaviors it chooses to support and value, and those it chooses to make unacceptable, unavailable, or discredit.

Bentz and Davis (1975) assessed the kinds of behavior that the public perceives as indications of mental and emotional illness in children. In a rural North Carolina community, the perceptions of three groups were compared when identifying emotional disorders in children. The three groups consisted of the general public, the community leaders, and school teachers. The groups were asked to label manifesting symptoms of six behaviors: paranoid schizophrenic, withdrawal schizophrenia, anxiety neurosis, compulsive phobic personality, and childhood behavior disorders such as temper tantrums and school phobia. Results showed that community leaders were more likely than teachers and day care workers, who in turn were more likely than the general public, to label these kinds of behaviors as indicators of emotional or psychiatric problems. For example, the leaders' percentages ranged from 57% who gave an affirmative answer for the temper tantrum vignette to 85% for the paranoid vignette. The teachers' responses ranged from 50% to 73% for the same disorder, respectively. For the general public the percentages of people who labeled the vignettes as expressive of an emotional or psychiatric disorder ranged from 18% for the temper tantrum to 73% for the paranoid vignette. For only two of eight case abstracts typifying childhood emotional disorders

does a majority of the general public label the case abstract as a mental disorder. Only 42% of the general public saw the paranoid child as abnormal. Previous research in recent years indicates that anywhere from 90% to 100% of respondents label this particular kind of behavior in adults as indicative of mental illness (Bentz, Edgerton, & Kherlopian, 1969). It is apparent that the general public in that particular North Carolina rural community was less sensitive to abnormal behavior in children than the other two groups.

Further investigations of cultural and social response to perception of illness have been undertaken to include cultural response to pain. Zborowski's (1952) classic study of reactions to pain showed that Jewish, Italian, Irish, and "old American" patients responded differently to pain (p. 17). While Jews and Italians responded emotionally tending to exaggerate their pain experience, Irish and "old Americans" in contrast were more stoical. Zborowski believed that response to pain and response to illness takes place within an elaborate cultural context in which the patient, his/her family, and the community respond in socially patterned ways. Zborowski reported that Jewish and Italian respondents related that their mothers' showed over-protective and over-concerned attitudes

toward the child's health and participation in sports. The subjects were constantly warned of the advisability of avoiding colds, injuries, fights, and other threatening situations. The author stressed that it is essential for nurses to recognize that these patterns are often acquired in the child's training and that the patients' prior training affects how and when a patient presents himself/herself and symptomology for medical attention.

Poznanski (1976) admitted that the reactions of individuals to pain and illness are not predictable. In studying the reaction of children to pain and illness the author concluded that pain and illness are related to the child's capacity to communicate and family support. Complicating the expressions of pain in children, as in adults, are the variables of anxiety and other emotional factors. In addition, some children tend to respond to pain in a style characteristic of their family (Poznanski, 1976).

Illness Perception and Religious/ Familial Environment

Fox (1971) shared a case history which exemplifies the effect religion may have on the perception of illness. The family, who came from a rural section of the state, belonged to a fundamental Protestant sect whose religion

and moral trends strongly affected their view of renal transplant and the son's kidney disease. The boy was going through a turbulent phase in his late adolescent life. He was experimenting with not living up to the fundamentalistic practices of the church by doing such things as smoking and drinking beer. His actions had a powerful impact on his parents, so much that they were convinced the etiology of his disease was due to his "irreligious" or "immoral" behavior (p. 44).

The relationship between the health of children and outcome of disease with that of the family environment was demonstrated in the famous Newcastle studies of Miller (1960). Similarly, Hagerty and Meyer (1969) found that such common crises as the death of grandparents, change of residence, loss of father's job, and so forth, occurred significantly more often prior to the appearance of a streptococcal infection than in the two weeks afterward. The authors felt that the occurrence of these family crises served to lower the child's resistance to infection. There was also an indication that age, intimacy of contact and family organization tend to influence susceptibility to infectious diseases. The relationship between such familial sociocultural factors as ethnicity, social status, community of origin and family unit all play a pivotal role

in determining the health status of a family member (Hagerty & Meyer, 1969).

Illness Perception and Life Change

Life change and its effect upon health have been examined by a number of investigators. The concept of change in one's life refers to significant change, regardless of whether it is considered to be desirable, undesirable, or under the person's direct control. Psychophysiological studies indicate that situations both naturally occurring and experimentally induced evoke major alterations in bodily tissues, organs, and systems (Graham & Reeder, 1972). These situations may be perceived as threats by the individual and thereby attempts by the individual at adaptive behavior (coping) are evoked. When these situations are sustained, they tend to enhance the body's vulnerability or susceptibility to a wide spectrum of agents important in disease etiology. The basic ideas inherent in the concept of life change were recognized by Dubos (1959). In discussing the phenomenon of infectious agents and their stimulation by environmental factors, Dubos (1959) theorized that microbes and environmental agents are constant components of the environment but cause disease only when there is some weakening of an individual by some other intervening factor. "Overwork,

overindulgence, an unhappy love affair, etc., are examples of intervening factors that may allow infection to proceed unrestrained" (p. 256).

Factors influencing the adolescent's perception of Life Change Events were studied by Mendez, Goodwin, Yeaworth, and York (1980). Utilizing the same Life Change Event Scale developed by Holmes and Rahe (1967), results showed that in spite of age difference, agreement on the weighting of life events considered highly stressful and linked to illness was close among both adults and adolescents. In fact, there was exact agreement on such loss or threatened loss items as death of family member, parents getting divorced and having a very sick parent or relative. In this study of adolescents, prior experience with an event, the grade level, and sex of the subjects emerged as variables which had significant influence on the perception of some events. Those individuals who had prior experience with an event perceived it as less stressful. Also, female subjects perceived more events to be more stressful than male respondents.

Cassel (1977) summarized the social/cultural/environmental factors as related to illness status in a four-way classification table (Figure 1). There are two types of psychosocial processes of importance in disease

LEVEL OF MEASUREMENT	
SOCIAL--"STRUCTURAL"	PERCEPTUAL
DELETERIOUS FACTORS	
Indices of Social Disorganization	Perceived Degree of Control Over Environment
Indices of Status (or Role) Discrepancy	Reference to Significant Social Groups
Degree to which Previous Experience had Adequately Prepared Individual for Current Situation	Degree to which Expectations of Significant Others for Behavior of Index Case are Conflicting or Ambiguous
PROTECTIVE FACTORS	
Indices of Strength of Affiliative Networks	Perception of Reliability of Others to Help in Times of Trouble

Figure 1. Cassel's Four-Way Classification Table

Source: Cassell (1977).

etiology. The first are those deleterious or stress factors which enhance disease susceptibility, while the second are protective factors which buffer or cushion the organism from the effects of noxious stimuli (including psychological stress factors). The author contended that the joint effects of these two sets of factors determine to a considerable extent the susceptibility of the organism to illness. It is not conceptualized by Cassel that psychosocial factors are directly pathogenic, but they are viewed as conditioning variables determining susceptibility to a wide variety of disease outcomes. Cassel (1977) further argued that actions designed to prevent disease should focus on attempts to change psychosocial factors, rather than on efforts at early case findings and detection of disease. Studies conducted by Holmes and Rahe (1967) investigated the linkages between life events and alterations in health status. The results indicated that a cluster of life events requiring a change in the individual's accustomed way of life is significantly associated with the onset of disease. The Schedule of Recent Life Events (Holmes & Rahe, 1967) and the Social Readjustment Rating Scale (Masuda & Holmes, 1967) were utilized to study the magnitude of stressful life events in the adult population.

Perception and Illness in Children

A number of variables influence children's perception of illness. Those variables shown to have a positive effect on a child's perception of illness are age and grade level (Gellort, 1962), father's education and mother's knowledge (Etzwiler, 1962), past illness history (Gellort, 1962), and urban versus rural place of residence (Ausubel & Sullivan, 1970). Hurlock (1972) cited additional variables influencing children's perception of illness: sibling position, social class, culture, value orientation, specific child rearing positions of the parents, and the mass media.

Misconceptions about illness and hospitalization have been identified as factors which contribute to psychological distress in hospitalized children (Peters, 1975). A frequently mentioned misconception is the child's belief that illness and hospitalization are punishment for transgressions, acts of commission or omission, whether real or imagined (Vernon, Foley, Spiowicz, & Schulman, 1965, p. 77). Those children holding these beliefs may then view the motivation underlying diagnostic and treatment procedures as punitive or hostile, thus jeopardizing the establishment of trust in the nursing staff (Peters, 1975).

There are several classic studies in which children's perceptions and beliefs about causality of illness are

reported. As early as 1936, Beverly found that nearly 90% of his sample of children with diabetes and cardiac conditions stated that they were ill because they were bad. Richter (1943) investigated emotional disturbance following nonspecific respiratory infections. All children sampled viewed illness as punishment for wrong-doing. In a psychiatric study of 25 children hospitalized with pulmonary tuberculosis Dubo (1950) found a tendency of 13 boys and 12 girls to assume personal responsibility for their illness. Assumption of personal responsibility occurred in spite of the children's knowledge of the specific infective agent involved and that the source of infection was in the homes from which they came.

Brazelton, Holder, and Talbot (1953) investigated emotional aspects of rheumatic fever in a sample of 20 hospitalized children ages 5 to 17 years. Many of the children expressed the idea that illness was punishment for their wicked deeds or thoughts. Many equated the duration of illness with bad behavior while in the hospital. Scheter (1961) studied an undesignated number of children suffering congenital and acquired orthopedic problems. He asked each child about the cause of his own disease. Regardless of whether the problem was congenital or acquired, questioning of the children consistently uncovered

that the disability was perceived as the result of and punishment for some misdemeanor.

Gips (1956) studied the interpretation of illness experiences by hospitalized children. Five categories of illness causality were identified. In order of decreasing frequency of use, they were: ideas which included, "I don't know"; self-induced illness; outside forces; and traumatic injury. Younger children in the study tended to blame others for illnesses, particularly their mothers. Older children tended to blame themselves; a trend in the direction of increasing objectivity with increasing age.

Rutter (1969) investigated children's beliefs about responsibility for illness. Her sample consisted of 333 children, 263 well boys and girls, 50 diabetic boys and girls, and 20 scoliotic girls. In all groups, children expressed significantly greater belief in self-responsibility for negative experiences related to illness or injury than they did for positively toned experiences.

Perceptions of illness were explored by Lynn, Glaser, and Harrison (1962). Lynn et al. (1962) compared the ideas of 25 rheumatic fever patients with those of 25 children suffering short term illnesses. Their sample consisted of 25 children, ages 5 through 11 years, with a nearly equal sex division. Each child was questioned

about the cause of his/her own illness and about illness of children in general. Nearly half of the children in each group indicated that they did not know the cause of their own illnesses. Nearly all the children, however, suggested a cause for illness in other children. Twice as many children felt that illness is caused by the ill child's own actions rather than attributed to circumstances beyond his/her control.

A discussion of the nature and perception of illness includes a discussion of the perception of treatment and hospitalization. These two events may exert a more powerful influence on illness and illness perception than the illness itself (Wu, 1973).

The Perception of Treatment and Hospitalization

Treatment and hospitalization are viewed as stimuli or stressors that the individual has to deal with when experiencing an illness (Roberts, 1976). As chronic illness becomes more prevalent, patients will have increasing contact with health care systems in the management of their health problems (Weinberger, Greene, & Marlism, 1981). Weinberger et al. (1981) studied patients' perception of treatment in a health care setting. The authors saw patient perception as the crucial first step in understanding patient satisfaction. Over 200 clinic patients were

interviewed and asked to evaluate four dimensions of health care: (1) time perception such as time spent waiting to see a physician, time spent at laboratory, and so forth; (2) cost perceptions; (3) provider competence; and (4) personal qualities of provider. The perceived length of time in the examining room with the physician positively affected a patient's view toward both the competence and personal qualities of the physician. An inverse correlation was found between patient opinions along each dimension of care and perceived number of minutes spent at the laboratory, the waiting room, and pharmacy. Multiple regression indicated that the perceived competence of the provider (the physician in this study) was also related to time spent waiting for various things. The perception of cost of care was found satisfactory for 90% of the patients (Weinberger et al., 1981).

Treatment may be administered for diagnostic, curative, replacement, or preventive purposes (Wu, 1973). Individuals tend to respond according to their assessment of the treatment in light of its purpose and their goals. Some individuals may demonstrate little or no concern about the tests they must undergo whereas other more informed patients may express interest in the results of specific tests. Each test carries with it certain meaning for the

individual experiencing it. The range of responses to the results of diagnostic tests and measurements varies from little or no concern to shock and a feeling of incredibility, to a sense of relief (Wu, 1973). According to Stephens (1965) if an individual has been prepared for the expected consequences of treatment and illness, especially the negative consequences, his/her changes of behaving in a disorganized, dazed, shocked, and incredulous way upon hearing the "bad news" will be greatly decreased (p. 74). Minna Field (1958) in her famous book Patients Are People stated:

When the purpose of the examination and test are not understood and when the results are not explained and the patient is afraid to ask questions, uncertainty and fear prey on his mind. (p. 64) .

Wu (1973) viewed treatment as both denotable (objective) and phenomenalistic (subjective). The author applied Allport's Theory of Perception to formulate a perspective of treatment (Figure 2). The denotable features include the purposes, acts, and equipment associated with treatment. The purposes of treatment have been identified through systematic observation. The acts and equipment are observable. Individual's experience treatment, like all other percepts, via the five senses. Judgment of the dimensions of treatment is accomplished through a subjective frame of reference and by perceptual constancy. Individuals

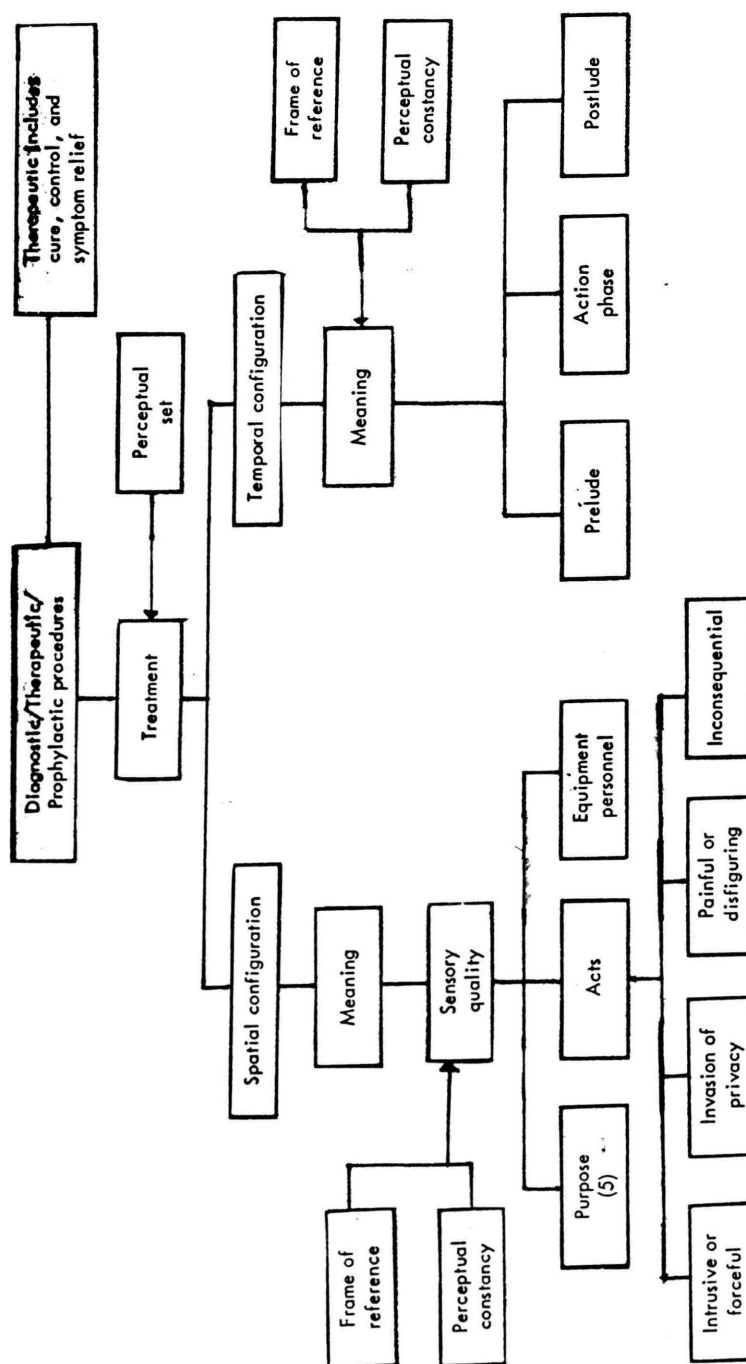


Figure 2. Experience of Treatment

Source: Wu (1973), p. 62.

give meaning either to the content of each phase or to the total configuration. In other words, they may respond in terms of the meaning associated with the purpose, the acts, or the equipment; or they may respond to the meaning assigned to the whole treatment; the whole configuration. "Behavior is consistent with the meaning that is perceived" (Wu, 1973, p. 62).

When the experience of illness is moved from the home into the hospital, illness perception takes on new dimensions. From the familiar secure surroundings of home, the patient is thrust into a strange and unfamiliar environment where strangers begin to rule his/her life. Dr. Leo Simons (cited by Brown, 1961) described perceptively the contrasts in "the culture of illness" between the home and hospital:

"In the hospital, the patient rings the bell and waits prayerfully for nurse or doctor, while at home the nurse and doctor ring the bell and wait patiently on the threshold. In the hospital the patient is 'admitted' and 'discharged' and all the relatives are visitors while at home the physician is 'on call' and can be 'changed' and even the nurse is a visitor. 'Orders' are written in the hospital while 'prescriptions' are expected in the home. In the hospital a nurse is 'assigned' to the patient, while at home she may be 'hired' and 'fired.' In the home nurses come and go while the patient stays on, but in the hospital it is just the reverse, with the nurse holding tenure. Perhaps for many people there are few moves in life which are more ominous than the move from the home to the hospital." (pp. 123-124)

The perception of hospitalization, like that of treatment and illness, is selective and related to a host

of internal and external factors operating at the time of hospitalization. Wu (1973, p. 73) applied Allport's Theory of Perception (1955) again to construct the "experience of hospitalization" (Figure 3). Wu theorized that hospitalization has both denotable and phenomenolistic features which include: previous experience with treatment or hospitalization, the particular level of personality development, the technical and psychological skill of the operator (care giver), the site of treatment or part of body involved, and the presence or attitude of parents and relatives. All of these features affect how the experience is perceived and what is perceived.

No two patients will view hospitalization in the same way. Reaction to hospitalization varies as values and situations change. Berland and Addison (1973) described hospitalization as "a return to the womb . . . a place where all of your biological needs are taken care of and are anticipated" (p. 32). The environment of a critical care unit may meet the biological needs of a patient but often fails to support psychological and social needs. According to Taylor (1971), the basic needs of an ill and often anxious individual are the same whatever the degree of illness or type of treatment the individual requires. In the critical care unit a patient's environment becomes

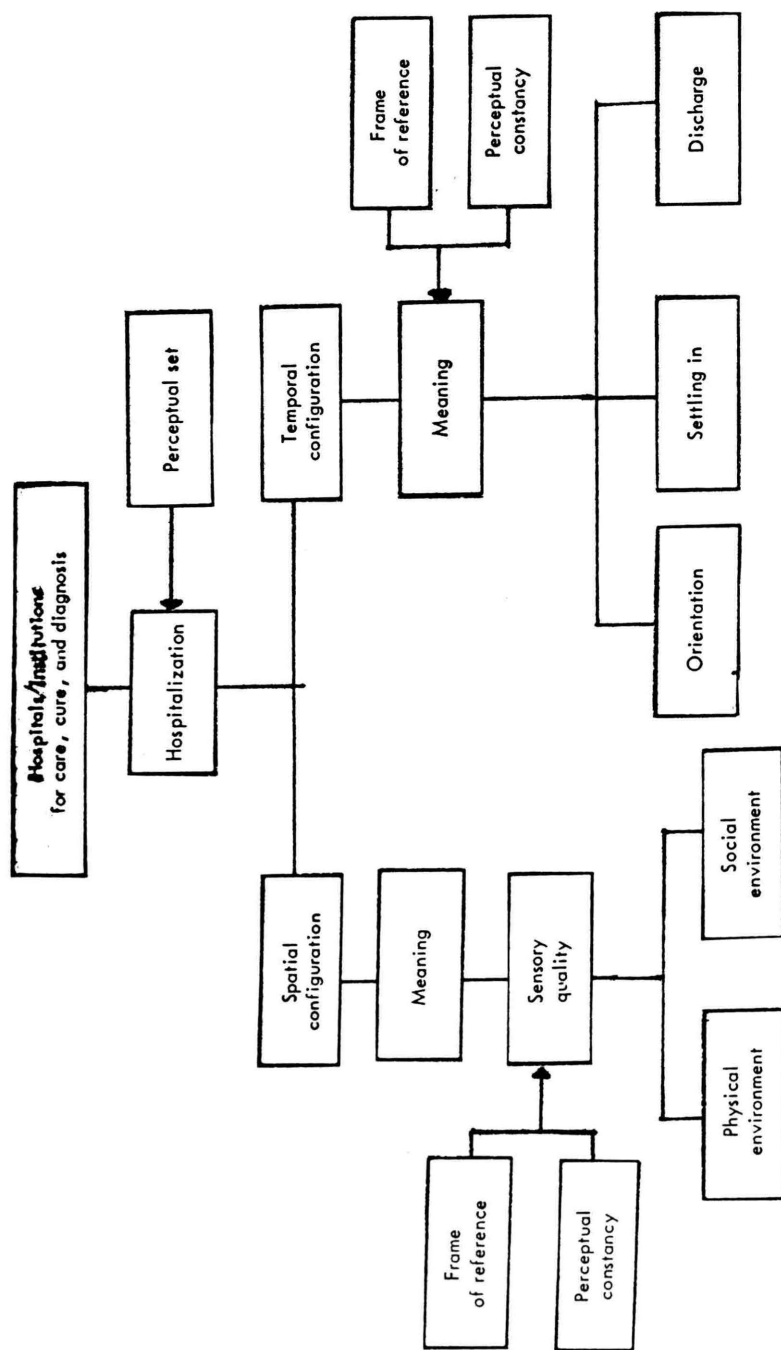


Figure 3. Experience of Hospitalization

Source: Wu (1973), p. 73.

machine oriented. What occurs is an unintentional by-product of technology referred to as "environmental overdose" (Roberts, 1976, p. 292). The physical layout of the critical care unit, as well as the use of various supporting devices and diagnostic equipment can have deleterious effects on the perceptual experiences of the patient and may subsequently have a negative effect on the recovery phase (Gowan, 1979). Bolin (1974) suggested that an altered environment often contributes to changes in the patient's affect, cognition, and perception and can be compounded by the experience of pain as well as by the patient's reaction to the illness.

Manipulation or change in environmental stimuli alters perception. Hall (1966) suggested that not only do individuals perceive the same experience and environment differently, but that they also inhabit different sensory worlds. Too much incoming stimuli and distorted perception may cause the patient to become confused. Nursing intervention is directed toward a goal of stability of a patient's perceptual field (Bolin, 1974). Initially, the nurse must differentiate details in the patient's perceptual field. The environment is new and foreign to him. In time, the patient becomes more aware of his environment and grows in the ability to differentiate meaningful

perceptions. The nurse fosters this growth by teaching the patient those things pertinent to himself/herself. This includes explanations of his/her environment and the physiological changes that may be occurring within the body. The nurse also includes explanations of behavioral responses to environmental and physiological changes (Roberts, 1976).

Perception reflects the psychological aspect of the sensory process (Roberts, 1976). It involves selection and organization of incoming stimuli. Attention becomes the selective part of perception. A patient's attention and awareness of hospitalization stems from perception and the behavioral responses it elicits. Volicer (1974) described a scale produced to measure stress associated with the experience of hospitalization. Hospitalized individuals on cancer, medical, and surgical wards were asked to rate 45 stress-producing events related to the experience of their hospitalization in terms of the relative amount of adaptation required to cope with each event. Using an arbitrary standard, the hospitalized patients' rank order of events were compared with the order of events by nonhospitalized respondents. A high consensus about the order of events was found. Volicers' intent in conducting the study was to collect data to compare the

ordering of stressful events perceived by the patients with responses given by nonhospitalized individuals. In interpreting the results, Volicer (1974) found the most striking difference between the two sets of ratings was the high rank given to "anticipated bad experience with medication" by the hospital sample (ranked 4th) as compared with the nonhospital sample (ranked 24th) (p. 237). Stress related to financial problems and lack of information concerning explanations of treatment and diagnosis were ranked relatively high by the hospital and nonhospital sample. Overall, the consensus of both groups about ratings was much higher for high stress items than for low stress items. For example, the "possibility of loss of function of senses" (e.g., eyesight, hearing, smelling) was ranked number 1 by both groups, while "acquaintance with someone else with the same medical problem" was ranked low, number 40, 45, by both groups, respectively (p. 237).

There is evidence of school-aged children perceiving intrusive procedures and surgery as threats of mutilation and hostile acts (Vernon et al., 1965). In a study to understand the meaning a child attaches to injections, Gips (1965) discovered that children often questioned the motivation of the nurses giving injections. The children related the procedure to punishment. Illness and the

treatment of illness may be perceived as punishment for a child's behavior (Peters, 1978). Marlens (1959) conducted an investigation of emotional attitudes toward self and the environment of 20 hospitalized and 20 nonhospitalized children who had similar medical problems. The author utilized three projective instruments to examine four parameters: (1) feelings of rejection and punishment, (2) somatic preoccupations and fears; (3) depression, anxiety, insecurity; and (4) hostility. The punishment-rejection parameter was significantly more manifest in the hospitalized children on all three projective measures. Marlens concluded that concomitant to hospitalization, the child demonstrated a reaction pattern consisting of feelings of rejection and punishment. The tendency to relate illness to human action has been noted to decrease with increasing age. Similarly, investigations revealed the tendency to assign the same causal factor to all illnesses decreases with increasing age (Beverly, 1963; Peters, 1978).

Whether child or adult, treatment and hospitalization are stimuli that a person experiencing illness will be called upon to deal with. Illness, treatment and hospitalization are perceived in terms of motives, attitudes, and preoccupations occurring at that time. The weight of the evidence is that man's interaction with his social and

interpersonal environment is relevant not only to his emotional state and mental health, but to all of the illnesses he experiences (Hinkle, 1974). According to Hinkle the relationship is, in the last analysis, a life and death proposition for him. Man's interaction with his social-cultural environment affects the source of his illness, sometimes to a great degree, and sometimes to only a small degree. How much, in what manner, and under what circumstances will vary with each individual. Hinkle and Wolff (1957) noted that the bulk of psychiatric and physical illness episodes occur at times when individuals perceive their life situations as unsatisfying, threatening and too demanding. A critical factor in the development of illness was found to be in the individual's perception of his/her life rather than the actual social or environmental stress involved.

Illness is one event that alters an individual's perception of needs by shifting the priorities of his needs (Maslow, 1968). During illness, certain needs are illuminated, such as relief from severe pain, and certain needs are suppressed, such as interaction socially with others. In the health care setting, perceptions may be influenced by characteristics of the patient, the interaction situations, and the nurse (Larson, 1977). One

central goal of nursing care is to help sick individuals regain health in a comfortable and satisfying way (Williamson, 1978). Important to the recovery process is recognizing and responding to the needs of sick individuals. Identifying and meeting the needs of patients is an intricate challenge for nursing. Needs perceived by patients and by nurses change during the course of illness and hospitalization. Factors influencing these changes are identified by Williamson (1978) as "the patient's level of illness, his overall experience with treatment and hospitalization, and his relationships with nurse (and others) responsible for care" (p. 172). Disagreement of the priority of patient needs may occur between nurse and patient. Patient satisfaction with nursing care may depend on how well nurse and patient agree on priority of needs. In turn, the extent to which the patient feels his needs are met will undoubtedly affect his ability to cope with the stress of illness.

Summary

This review of literature was presented in order to establish a foundation for understanding the concept of perception, the concept of illness, and the perception of illness. In addition, the perception of treatment and hospitalization as related to the experience and perception

of illness was explored. An attempt was made to show that perception may be subjective, objective, or a combination of both and that perception varies from individual to individual, child or adult, depending on that individual's motives, needs, and attitudes.

CHAPTER 3

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

This study employed a nonexperimental descriptive two-group research design. The primary concern of the descriptive research is to discover new facts by obtaining accurate and meaningful descriptions of the phenomena under study (Abdellah & Levine, 1965). A questionnaire was used to obtain data.

Setting

This study took place in a 300 bed corporately owned, private hospital. The hospital was located within the southeast section of a large metropolitan area in the Southwestern United States. Most patients were economically independent and able to pay for cost of care and/or had eligibility for third party payment to meet health care costs. Within the hospital were medical, surgical, orthopedic, obstetrical, coronary, and intensive care units, and an emergency department. All units within the hospital were included as resource areas in the study except the coronary care unit, intensive care unit, and the emergency department.

Population and Sample

The target population consisted of nurses and patients from a private suburban hospital. The sample consisted of 30 nurses and 30 patients who volunteered to participate in the study and who met the criteria of nurse and patient. In addition, nurse participants were white, middle class, urban suburban residents. The patients were at least 18 years old, white, middle class and urban suburban residents. Patients diagnosed as having psychiatric disorders and those individuals not oriented to time, place, and/or person were excluded from the study. All participants were able to read, write, and speak English.

The sample was selected from six units within the hospital: two medical, two surgical, one orthopedic, and one obstetrical unit. A nonprobability convenience sampling technique was used. Individual patient charts were reviewed by the investigator on each of the resource units to determine the patient sample, whereas nurses were contacted as a group during the 7 am-3 pm, 3 pm-11 pm shift report on the resource units. The first 30 nurses and 30 patients from the selected units who met the criteria and agreed to participate in the study constituted the sample.

Protection of Human Subjects

The human rights of the subjects agreeing to participate in the study were protected by the following ethical measures:

1. Permission to conduct the study was secured from the Human Research Review Committee of Texas Woman's University (Appendix B).
2. Permission to conduct the study was secured from the agency in which the study took place (Appendix B).
3. An oral presentation regarding all aspects of the study was provided each participant (Appendix A) and questions were fully answered.
4. Permission was obtained from each individual agreeing to participate in the study with a signed consent form (Appendix B).
5. Anonymity of the participants was provided by the exclusion of participant names on the questionnaires and written research study.
6. A subject's decision not to participate in the study was respected.
7. Individuals were instructed that they could withdraw at any time from the study.

Instrument

The instrument used in the study was the Perception of Illness Questionnaire (Appendix A) developed by Nyberg (1978) with an added demographic data section. The instrument is a self-administered questionnaire taking approximately 15 to 20 minutes to complete. The questionnaire lists 20 patient situations which may be observed in an Emergency Department. Next to each of the 20 situations are two ladder scales which measure: (1) degree of threat to life; and (2) maximum delay of physician contact (the required promptness of treatment). Nyberg used these ladder scales based on those developed by Cantril, Botwinick, and Storandt (1974). The subjects, after reading the 20 situations, were then directed to indicate the point on each ladder scale that they believed to be representative of the situation. If the situation seemed to represent a high threat to the patient's life, a mark was to be placed high on the first ladder, i.e., a high degree of threat to life. If the maximum amount of time a patient could wait to see a physician (without causing worsening of the condition) was 48 hours, a mark was placed at the bottom of the second ladder, Maximum Delay of Physician. The top space of the ladder scale received a score of 1 and the bottom space a score of 10. There

were no correct or incorrect answers. When the subjects had completed this task they were directed to go back through all patient situations and assign each to a Category of Severity. Nyberg (1978) developed the categories of severity based on a list published by the American Hospital Association in 1973. These categories are also consistent with the recommendations for priority assessment found in the text, Practice of Emergency Nursing (Cosgriff & Anderson, 1975, pp. 61-70). These four categories are:

Category 1 (Emergent):

Highest Priority; should be seen immediately, patient's life in danger if not treated within 30 minutes.

Category 2 (Urgent):

Secondary priority; should see physician within 30 minutes to 6 hours.

Category 3 (Non-urgent):

Lower Priority; patient believes he is ill or injured and exhibits complaints. May be treated in another health facility in 6 to 24 hours.

Category 4 (Scheduled):

Low Priority; patient comes to Emergency Department by previous arrangement and does not necessarily need treatment within 24 hours.

The Categories of Severity and the ladder scores are ordinal measures.

Nyberg (1978) submitted the 20 patient situation categories to be examined for content validity to three experts in the field. Three experienced emergency department nurses, one of whom is a critical care practitioner, agreed unanimously that the patient categories were examples of actual patient problems that may occur in an emergency department. The internal consistency of the instrument was examined for this sample through the use of Cronbach's alpha (α) test. Results are: threat to life, $\alpha = .59$; physician contact, $\alpha = .68$; and severity, $\alpha = -.02$.

Data Collection

Upon approval from the Human Research Review Committee of Texas Woman's University and the study agency, data collection commenced. Data were collected over a two-week period. Permission was obtained from the head nurse on each selected unit for the investigator to speak to the nurses during the eight hours shift report. At this time the investigator verbally explained the study according to purpose, risks, and benefits. Nurses wishing to volunteer signed a consent form and were given the questionnaire to complete. Instructions were given to return the completed questionnaire within a week to the head nurses' office.

Patients selected as possible subjects were visited individually by the investigator. The patients received a verbal explanation exactly as the nurses, and then were asked if they would like to participate in the study. If a patient agreed to volunteer, a signed consent form was then obtained. The investigator then submitted the questionnaire to the patient and gave the patient an opportunity to ask any questions. The patient was told that the investigator would remain on the unit to pick up the questionnaire after it was completed by the patient. Participants were not able to view questionnaires other than their own.

Treatment of Data

The Categories of Severity, the degree of threat to life scale, and the maximum delay of physician contact scale were examined for each subject and assigned a rank score. Mann-Whitney U tests were used to determine whether statistical differences exist between the nurse group and the patient group on the dependent variables. The demographic data were examined by descriptive statistical tests such as frequencies and measures of central tendency. The chi square analysis was used to test for significant differences on the three scales.

Summary

This chapter presented the procedure for collection and treatment of data. This research design was constructed to examine if perceptual differences concerning illness and its severity occur between nurses and patients. The design required patients and nurses to rate the severity of 20 hypothetical patient problems. Steps taken to protect the human rights of the subjects were outlined. The instrument was described, and the statistical test appropriate to the research design and research hypotheses for treatment of data was discussed. Chapter 4 presents the analysis of data obtained in this study.

CHAPTER 4

ANALYSIS OF DATA

A nonexperimental, descriptive study was conducted to determine whether perceptual differences exist between the nurse group and patient group when rating severity of illness. This chapter is divided into two sections and provides the analysis of data. The first section contains a description of the sample and the second section contains the analysis and interpretations of the data.

Description of Sample

The sample was comprised of 30 patients and 30 nurses selected from a 300-bed corporately-owned private hospital. Using nonprobability convenience sampling, all subjects volunteered to answer the questionnaire, Perception of Illness (Nyberg, 1978). The subjects ranged in age from 22 to 69 years with a mean of 41.0. All respondents were white. Nineteen (63.3%) of the patient sample were male, and 11 (36.7%) were female. The patient sample was predominantly married, middle socioeconomic level, suburban residents with a mean age of 44 years. Thirty (100%) of the nurse sample were female. The nurse sample were predominantly married, middle socioeconomic level, suburban

residents with a mean age of 37 years. This information is shown in Table 1.

Findings

Three hypotheses were formulated for the purpose of this study: (1) Nurses and patients will differ in their perceptions of the degree of threat to life represented by patient problems. (2) Nurses and patients will differ in their perceptions of maximum delay of physician contact in treating patient problems. (3) Nurses and patients will differ in their perceptions of severity of patient problems. The Mann-Whitney U test was used to compare the responses of the patient and nurse sample. The Mann-Whitney U is a nonparametric procedure which tests the difference between the two independent samples. The test uses the assignment of ranks to the two groups of measures. The sum of the ranks for the two groups can then be compared by computing the U statistic (Polit & Hungler, 1978).

The subjects were asked to evaluate 20 simulated patient situations according to their perceptions in three categories: (1) threat to life, (2) maximum delay of physician contact, and (3) severity of the problem. Thus 60 items emerged. Each of these items was subjected to Mann-Whitney U analysis. A z-score was then computed to correct for tied ranks. Of the 60 items measured,

Table 1

Sex, Age, Marital Status, Socioeconomic Level, and
Residence of 30 Patients and 30 Nurses Who Participated
in a Perceptual Difference Study

Variable	<u>Patient</u>		<u>Nurse</u>		<u>Total</u>	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
<u>Sex</u>						
Male	19	63.3	0	0.0	19	31.7
Female	<u>11</u>	<u>36.7</u>	<u>30</u>	<u>100.0</u>	<u>41</u>	<u>68.3</u>
Totals	30	100.0	30	100.0	60	100.0
<u>Age</u>						
20-29 years	7	23.3	10	33.3	17	28.3
30-39 years	7	23.3	10	33.3	17	28.3
40-49 years	0	0.0	5	16.7	5	8.4
50-59 years	6	20.0	4	13.3	10	16.7
60-69 years	<u>10</u>	<u>33.4</u>	<u>1</u>	<u>3.4</u>	<u>11</u>	<u>18.3</u>
Totals	30	100.0	30	100.0	60	100.0
<u>Marital Status</u>						
Single	4	13.3	1	3.3	5	8.3
Married	22	73.4	27	90.0	49	81.7
Divorced	0	0.0	2	6.7	2	3.3
Widowed	<u>4</u>	<u>13.3</u>	<u>0</u>	<u>0.0</u>	<u>4</u>	<u>6.7</u>
Totals	30	100.0	30	100.0	60	100.0
<u>Socioeconomic Level</u>						
Upper	0	0.0	0	0.0	0	0.0
Upper Middle	6	20.0	8	26.7	14	23.3
Middle	21	70.0	20	66.7	41	68.3
Lower Middle	3	10.0	2	6.6	5	8.4
Lower	<u>0</u>	<u>0.0</u>	<u>0</u>	<u>0.0</u>	<u>0</u>	<u>0.0</u>
Totals	30	100.0	30	100.0	60	100.0
<u>Area</u>						
Urban	8	26.7	2	6.7	10	16.7
Suburban	22	73.3	27	90.0	49	81.6
Rural	<u>0</u>	<u>0.0</u>	<u>1</u>	<u>3.3</u>	<u>1</u>	<u>1.7</u>
Totals	30	100.0	30	100.0	60	100.0

patients and nurses differed significantly ($p \leq .05$) on 10 of the items. Four of these fell in the threat to life category, three in the delay of physician contact category, and three in the severity of problem category. The following three sections report the findings from the Perception of Illness Questionnaire as related to the three hypotheses.

Threat to Life

For the threat to life category the following hypothesis was formulated: Nurses and patients will differ in their perceptions of the degree of threat to life represented by patient problems.

On the threat to life items, significant differences between the two groups were found on four out of 20 patient situations (Table 2). In each of these four situations the patient group perceived a higher degree of threat to life than did the nurse group. No predominant theme emerged when reviewing these four situations other than the fact that two of the four situations dealt with children. The chi square analysis was used to test for significant differences on the scale and no significant differences were found. Since no significant differences were found it was concluded that nurses and patients do not differ significantly in their perceptions of the degree of threat to life.

Table 2

Mean, Mean Ranking, z Score, and Probability for Items Found To Be Significant in Variable, Threat to Life, for 30 Patients and 30 Nurses Who Participated in a Perceptual Difference Study

Situation	Synopsis	Mean	Mean Ranking		z Score	p
			Nurse	Patient		
8	44 year old executive who developed severe chest pain and difficulty breathing	2.27	26.50	34.50	-2.12	.03
13	8 year old child with complaints of nausea and stomachache especially on right side	3.45	24.88	36.12	-2.54	.01
18	Adult in a fender-bender auto accident who walked to telephone to report accident	7.33	24.97	36.03	-2.54	.01
20	2 year old baby with earache, fever for 48 hours and temperature of 103.6 degrees	4.85	23.75	37.25	-3.03	.00

Physician Contact

For the maximum delay of physician contact category the following hypothesis was formulated: Nurses and patients will differ in their perceptions of maximum delay of physician contact in treating patient problems.

On maximum delay of physician contact items, significant differences were found between the two groups in 3 out of 20 patient situations. On each of the three items found to be significantly different the patient group perceived that the physician should see the patient in a shorter amount of time after arriving in an Emergency Department than did the nurse group (Table 3). Again two of the three situations dealt with children. The chi square analysis was again used to test for significant differences in the scale and no significant differences were found. Since no significant differences were found it was concluded that nurses and patients do not differ in their perceptions of the maximum delay of physician contact in treating patient problems.

Categories of Severity

For the final category measured, severity of problem, the following hypothesis was formulated: Nurses and patients will differ in their perceptions of severity of patient problems.

Table 3

Mean, Mean Ranking, z Score, and Probability for Items Found To Be Significant in Variable, Physician Contact, for 30 Patients and 30 Nurses Who Participated in a Perceptual Difference Study

Situation	Synopsis	Mean	Mean Ranking		z Score	p
			Nurse	Patient		
8	44 year old executive who developed severe chest pain and difficulty breathing	2.22	26.72	34.28	-1.95	.05
13	8 year old child with complaints of nausea and stomachache especially on right side	3.43	25.88	35.12	-1.62	.04
20	2 year old baby with earache, fever for 48 hours and temperature of 103.6 degrees	3.96	25.00	36.00	-2.47	.01

Three items were found to have significant values (Table 4). Again the patient group perceived the situations to be in a higher category of severity than did the nurse group. The chi square analysis was used to test for significant difference in the scale, and no significant differences were found in perceptions of severity.

Summary

This chapter was concerned with the analysis and subsequent treatment of the data obtained in the study. The perceptions of the predominantly white, middle class, urban-suburban nurse and patient groups were surveyed and measured by the Perception of Illness Questionnaire. The findings regarding the three hypotheses were presented. After utilization of the Mann-Whitney U test patients and nurses were found to differ significantly in their perception of illness on only 10 out of 60 items. The other 50 items showed no significant differences between nurses' and patients' perceptions. Therefore, it was concluded that: Nurses and patients do not differ significantly in their perceptions of degree of threat to life, maximum delay of physician contact allowed in treating patient problems, or severity of patient problems.

Table 4

Mean, Mean Ranking, z Score, and Probability for Items Found To Be Significant in Variable, Categories of Severity, for 30 Patients and 30 Nurses Who Participated in a Perceptual Difference Study

Situation	Synopsis	Mean	Mean Ranking		z Score	p
			Nurse	Patient		
9	Adult male describes painful and tearing sensation in eye during work in machine shop	1.93	26.57	34.42	-1.93	.05
17	Adult male with one inch laceration on arm, bleeding has stopped, skin spread apart	2.67	24.87	36.13	-2.67	.01
20	2 year old baby with earache, fever for 48 hours and temperature of 103.6 degrees	2.32	25.75	35.25	-2.28	.02

CHAPTER 5

SUMMARY OF THE STUDY

The purpose of this study was to determine whether: Nurses and patients differed in their perceptions of the degree of threat to life, maximum delay of physician contact (time), and severity of patient problems. In this chapter, the research is summarized, the findings are discussed and related to other research, implications and conclusions are stated and recommendations for further study are made.

Summary

A nonexperimental descriptive research design was utilized to investigate the three research hypotheses. Sixty subjects, 30 patients and 30 nurses, completed the Perception of Illness Questionnaire (Nyberg, 1978) as a means of determining whether perceptual differences exist between nurses and patients concerning severity of patient problems.

Data collected were analyzed by the Mann-Whitney U and chi square analysis nonparametric statistical tests. The tests were used to determine if there were significant differences between the two groups according to three

categories. The three categories measured were: threat to life, maximum delay of physician contact (time), and severity of problems.

Discussion of Findings

The final data relating to the differences between the perceptions of nurses and patients indicates that nurses and patients, using the instrument Perception of Illness Questionnaire, rated severity of illness in a similar way. On the individual items the group differed significantly on only 10 of the 60. Similar overall findings were reported in Nyberg's (1978) study of perception of patient problems. Using the Perception of Illness Questionnaire which she developed, Nyberg's results indicated that the groups (patients/consumers, nurses and graduate nursing students) differed significantly on only 9 of the 60 items. Five of these items measured threat to life, two measured physician contact, and two measured categories of severity. In this investigation significant differences were as follows: four items measured threat to life, three measured physician contact, and three measured categories of severity. In each parameter, threat, time, and severity, the patients' mean ranking of scores was less than that of the nurses in 53 out of 60 patient situations indicating that patients viewed the majority of the

situations more seriously than the nurses. Data collected from Nyberg's (1978) study indicated the consumer/patient group viewed the situations the least seriously of the three groups. This was opposite of the results obtained from this study and was of interest to Nyberg "who expected the opposite effect" (p. 18). Nyberg concluded that the more nursing education the group had, the more seriously the situations were viewed. The Emergency Department nurses in Nyberg's study had the most consistent results. Nyberg correlated this to training as well as experience on assessing severity of patient problems. The opposing results of both studies may indicate a difference in sampling technique. Both studies controlled for identical variables of race, socioeconomic level, and area of residence. Nyberg's patient population was consumers interviewed in the Emergency Department. This study's patient population was composed of individuals hospitalized at the time of the investigation. Also the nurse subjects in Nyberg's study were limited to two specific groups: Emergency Department nurses and graduate nursing students. The nursing population in this study was limited to medical-surgical nurses and did not include a third group of graduate students. Education level of the nurse subjects was not controlled for in either study.

In each of the 10 variables found to be significantly different, the patient group viewed the situations as more life threatening requiring the prompt attention of a physician than did the nurse group. In addition, the patient group believed the situations were of a higher priority of severity than did the nurse group. The tendency of the patients to view illness more seriously than the nursing group in the significant items may be due to several factors such as patients having less professional education and knowledge of the implications of patient problems. This in turn may lead to over-reaction by the patient group to the patient situations. In addition, the nurse group's professional education enables them to more accurately assess the severity of patient problems. Lastly, the fact that the patient population was currently hospitalized at the time of the interview may have increased their awareness of a patient's desire to obtain attention and treatment of a problem.

Conclusions and Implications

Based on the findings and within the limitations of this study, the following conclusions were drawn:

1. Nurses and patients do not differ in their perceptions of the degree of threat to life in the majority of patient situations.

2. Nurses and patients do not differ in their perceptions of maximum delay of physician contact (time) in the majority of patient situations.
3. Nurses and patients do not differ in their perceptions of severity of illness in the majority of patient situations.
4. Nurses and patients, when using a categorization instrument (Perception of Illness Questionnaire), assess the severity of patient problems in a similar manner. However, the patients measure severity of illness consistently higher than the nurses.

Based on the findings and conclusions of this study the following implications were suggested:

A review of the literature has shown that socioeconomic, cultural, and racial factors influence perception. This study shows that even though nurses have obtained a professional knowledge of illness, the two groups (nurses and patients) perceive illness in a similar manner. Therefore even though socioeconomic, cultural, and racial factors influence perception, the results of this study indicate it may not be true that these factors influence nurses' and patients' abilities to perceive illness in a similar manner.

Recommendation for Further Study

Based upon the findings of this study, the following recommendations are made:

1. The questionnaire developed by Nyberg (1978) should be administered using a larger sample of patients and nurses with random selection of subjects to validate that nurses and patients perceive illness in a similar manner.
2. A similar study should be conducted using subjects from different socioeconomic, cultural, and racial backgrounds to compare the results to the subjects who met the population criteria in this study.
3. The instrument should be retested for reliability.

APPENDIX A

QUESTIONNAIRE PACKET

Oral Description of the Study

"I am a graduate student working toward a Master of Science Degree from the College of Nursing at Texas Woman's University. As part of the fulfillment for that degree, I am conducting a research project concerning how people perceive things. In particular, I am investigating how patients and nurses perceive illness. You as a participant in the study will be given a questionnaire and then asked to rate 20 different patient problems. There will also be instructions to rate severity of illness according to four categories of severity. I want to emphasize that there is no right or wrong answer, only the answer you select. The entire questionnaire takes approximately 15 to 20 minutes to complete. It is not required that your signature accompany the completed questionnaire. Strict confidentiality will be observed if you decide to participate. If you would like to participate in the study, I need you to sign an informed consent form which confirms your agreement to participate. Do you have any questions? For patients participating in the study, I will return in 30 minutes to collect the completed questionnaire."

DATA SHEET

Please provide the following information:

1. I am a
☐ patient
☐ registered nurse
2. My sex is
☐ male
☐ female
3. My age is _____
4. My marital status is
☐ single (never married)
☐ married
☐ divorced
☐ widowed
5. I am
☐ Caucasian
☐ Black American
☐ Mexican American
☐ Other
6. I am in the
☐ upper socioeconomic level
☐ upper middle socioeconomic level
☐ middle socioeconomic level
☐ lower middle socioeconomic level
☐ lower socioeconomic level
7. I live in an area that is
☐ urban
☐ suburban
☐ rural

Listed on the following pages are 20 hypothetical situations resulting in visits to a hospital emergency room. To the right of the situations are two scales indicating the seriousness of each situation.

The first scale measures the degree to which the patient's life is threatened. If you believe the threat to life is great, place an "X" at or near the top "step." If you consider the threat to be low, mark one of the lowest steps. If you consider the threat neither life threatening nor low, mark the mid range of the ladder.

The scale on the right indicates the longest time a patient can wait to see a physician. If you believe the patient will die if he doesn't see a physician immediately, mark the top step. If you believe the patient could wait without his condition worsening significantly, mark the appropriate step.

1. Tim was a 15 month old who had played all day and gone to bed with no problems except for a "little drippy nose." Two hours later his mother heard a strange noise and rushed in to find Tim having great difficulty breathing. He struggled with every breath and had a high pitched noise in his throat when he tried to take in air. His parents rushed him to the hospital and the breathing seemed to get even worse on the way.

Threat to Life		Physician Contact	
Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
			36 hrs.
	Low		48 hrs.
No Threat		Delayed	

2. Jane had been at a party and slipped on the stairs as she left. Her right ankle became slightly swollen, and it was somewhat painful to walk on, so she came to the emergency room.

Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
			36 hrs.
	Low		48 hrs.
No Threat		Delayed	

3. Beth had been bothered for two weeks with a mild rash around her waist and armpits. She felt well otherwise, but wanted the ER doctor to treat her rash.

Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
			36 hrs.
	Low		48 hrs.
No Threat		Delayed	

4. Donna, age 18, was found unconscious in her apartment by her roommate who called an ambulance. On the way to the hospital, she had a seizure.

Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
			36 hrs.
	Low		48 hrs.
No Threat		Delayed	

5. John was involved in a serious automobile accident 1 year ago. He had received a severe laceration on his forehead in the accident. It was stitched immediately, but it had healed with a lot of scar tissue which bothered John's self image. He came to the emergency where a plastic surgeon did a scar revision (removed the scar).

Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
			36 hrs.
	Low		48 hrs.
No Threat		Delayed	

6. Rob hit his head on a machine at work and came to the ER with a large bump on his forehead. He had been unconscious briefly but felt "OK" now. His supervisor sent him to the ER to be "checked out."
7. Bob just couldn't seem to "shake" his cold. The hacking cough had made it difficult to sleep for a week, so he came to the ER for treatment.
8. Gary is a 44 year old executive who works long hours. While at a dinner party he developed severe pain in his chest and left arm and some difficulty breathing. His wife brings him to the ER.
9. Bruce worked in a machine shop filing metal parts for repairing cars. At 1 p.m. he felt something in his eye. He tried to get it out and rinsed the eye with water, but it continued to be painful and tearing. His boss had a co-worker bring him to the ER to have the doctor "take a look."
10. Jim, age 50, was required by his employer to have a complete physical examination every year. His family doctor had done the examination in his office but suggested to Jim that he should also have a blood test and sigmoidoscopic exam (rectal examination). Jim came to the emergency room where his physician performed the sigmoidoscopy.
11. Lee has had an ulcer for 2 years and has noticed pain in his stomach for a couple of days. Following the office Christmas party the pain seemed more severe. At 8 a.m. he had a large, black stool and at 10 a.m. he vomited a "dishpanful" of red blood.
12. Terry, age 7, was brought to the emergency room by her parents. They were to meet Dr. Brown who would remove a planter's wart from Terry's foot. The wart had been bothering Terry for 6 months.

Threat to Life		Physician Contact	
Highest Threat		Immediate	
	High		0 min.
	Med.		10 min.
	High		1 hr.
	Med.		3 hrs.
	Low		6 hrs.
	Low		8 hrs.
			12 hrs.
			24 hrs.
			36 hrs.
			48 hrs.
No Threat		Delayed	

Highest Threat		Immediate	
	High		0 min.
	Med.		10 min.
	High		1 hr.
	Med.		3 hrs.
	Low		6 hrs.
	Low		8 hrs.
			12 hrs.
			24 hrs.
			36 hrs.
			48 hrs.
No Threat		Delayed	

Highest Threat		Immediate	
	High		0 min.
	Med.		10 min.
	High		1 hr.
	Med.		3 hrs.
	Low		6 hrs.
	Low		8 hrs.
			12 hrs.
			24 hrs.
			36 hrs.
			48 hrs.
No Threat		Delayed	

Highest Threat		Immediate	
	High		0 min.
	Med.		10 min.
	High		1 hr.
	Med.		3 hrs.
	Low		6 hrs.
	Low		8 hrs.
			12 hrs.
			24 hrs.
			36 hrs.
			48 hrs.
No Threat		Delayed	

Highest Threat		Immediate	
	High		0 min.
	Med.		10 min.
	High		1 hr.
	Med.		3 hrs.
	Low		6 hrs.
	Low		8 hrs.
			12 hrs.
			24 hrs.
			36 hrs.
			48 hrs.
No Threat		Delayed	

Highest Threat		Immediate	
	High		0 min.
	Med.		10 min.
	High		1 hr.
	Med.		3 hrs.
	Low		6 hrs.
	Low		8 hrs.
			12 hrs.
			24 hrs.
			36 hrs.
			48 hrs.
No Threat		Delayed	

Highest Threat		Immediate	
	High		0 min.
	Med.		10 min.
	High		1 hr.
	Med.		3 hrs.
	Low		6 hrs.
	Low		8 hrs.
			12 hrs.
			24 hrs.
			36 hrs.
			48 hrs.
No Threat		Delayed	

13. Sally, age 8, had been crabby and lethargic all day. She refused to eat her supper telling her mother her stomach hurt. By 8 p.m. she was crying because of the pain and felt nauseated. Her stomach hurt "all over," but especially on the right side.

Threat to Life		Physician Contact	
Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
	Low		36 hrs.
			48 hrs.
No Threat		Delayed	

14. Craig, age 2 months, had been a fussy baby for nearly 3 weeks. He seemed to want to eat all the time, but as soon as he finished his bottle he would draw up his knees and cry.

Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
	Low		36 hrs.
			48 hrs.
No Threat		Delayed	

15. Rose was driving home on icy roads when she had a collision with a pick-up truck. Her leg was twisted under the dash and the bone is protruding through the skin. She also complains of severe pain in her left shoulder and rib cage and difficulty breathing.

Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
	Low		36 hrs.
			48 hrs.
No Threat		Delayed	

16. Don's doctor discovered in a routine lab test that Don was very anemic. The doctor prescribed weekly iron shots which were given to Don in the emergency room each Friday morning.

Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
	Low		36 hrs.
			48 hrs.
No Threat		Delayed	

17. Rick came to the ER because of a 1" laceration on his arm he received while working on his car. The bleeding stopped after 10 minutes, but the skin was spread apart showing fat globules underneath.

Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
	Low		36 hrs.
			48 hrs.
No Threat		Delayed	

18. Ginny had been involved in a "fender-bender" type auto accident. Her hand was bruised and her leg seemed "stiff." She had walked 1/2 block to a telephone after the accident. The patrolman suggested she be examined by a physician.

Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
	Low		36 hrs.
			48 hrs.
No Threat		Delayed	

19. Betty broke her arm while roller skating 3 weeks ago. Her arm was placed in a cast, and she returned to the emergency room now for an X ray (to check the healing process) and a new cast.

Highest Threat		Immediate	
	High		0 min.
			10 min.
			30 min.
	Med.		1 hr.
	High		3 hrs.
			6 hrs.
	Med.		8 hrs.
	Low		12 hrs.
			24 hrs.
	Low		36 hrs.
			48 hrs.
No Threat		Delayed	

20. Tommy, age 2, awakened at 2 a.m. screaming and pulling at his left ear. He has had a cold for 2 days and now his temperature was 103.6 recetally. In spite of a dose of baby aspirin, he continued to cry for a solid hour, so his mother brought him to the ER.

Threat to Life		Physician Contact	
Highest Threat		Immediate	
	High		0
			10 min.
	Med.		30 min.
	High		1 hr.
			3 hrs.
	Med.		6 hrs.
	Low		9 hrs.
			12 hrs.
	Low		24 hrs.
			36 hrs.
			48 hrs.
No Threat		Delayed	

INSTRUCTIONS

Please read the categories described below. Now turn back to the situations and write a category number (1, 2, 3, or 4) right under the number of the situation.

Category 1

Highest priority--should be seen by a physician immediately.
Patient's life is in danger if not treated within 30 minutes.

Category 2

Secondary priority--should be seen by a physician from within 30 minutes to 6 hours. Patient's life may be in danger or serious complications may result if treatment is delayed beyond 6 hours.

Category 3

Lower priority--patient believes he is ill or injured and exhibits symptoms or complaints. Condition is such that it may be treated in another health facility in 6 to 24 hours. Threat to life is low, and delay of treatment for 6 hours will probably not change the outcome of treatment.

Category 4

Low priority--patient comes to the emergency room by previous arrangement for treatments or procedures which are not specifically needed within 24 hours.

THANK YOU for your cooperation and participation.

APPENDIX B

AGENCY APPROVALS AND

CONSENT FORMS

TEXAS WOMAN'S UNIVERSITY
HOUSTON CAMPUS
HUMAN RESEARCH REVIEW COMMITTEE
REPORT

STUDENT'S NAME Nancy Lee Hooser RN

PROPOSAL TITLE Differences in Perception between Nurse and Patient

concerning Severity of Patient Problems

COMMENTS: _____

DATE: 10/6/81

R. P. Bennett
~~Disapprove~~ Approve

[Signature]
~~Disapprove~~ Approve

[Signature]
~~Disapprove~~ Approve

[Signature]
~~Disapprove~~ Approve

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING
DENTON, TEXAS 76204

DALLAS CENTER
1810 INWOOD ROAD
DALLAS, TEXAS 75235

HOUSTON CENTER
1130 M. D. ANDERSON BLVD.
HOUSTON, TEXAS 77030

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE _____

GRANTS TO Nancy Lee Hooser, R.N.
a student enrolled in a program of nursing leading to a Master's Degree at Texas Woman's University, the privilege of its facilities in order to study the following problem:

TITLE: Difference in Perceptions of Illness Between Nurses and Patients

The conditions mutually agreed upon are as follows:

1. The agency (may) (may not) be identified in the final report.
2. The names of consultative or administrative personnel in the agency (may) (may not) be identified in the final report.
3. The agency (wants) (does not want) a conference with the student when the report is completed.
4. The agency is (willing) (unwilling) to allow the completed report to be circulated through interlibrary loan.
5. Other _____

Date: August 12, 1981

Signature of Agency Personnel

Signature of Student

Signature of Faculty Advisor

* Fill out and sign three copies to be distributed as follows: Original-Student;
First copy - agency; Second copy - TWU College of Nursing.

REFERENCES

- Abdellah, F., & Levine, E. Better patient care through nursing research. New York: Macmillan Co., 1965.
- Allport, F. Theories of perception and the concept of structure. New York: John Wiley & Sons, 1955.
- Anderson, R., Anderson, O., & Smedby, B. Perception of and response to symptoms of illness in Sweden and the United States. Medical Care, 1968, 6(18), 22-30.
- Ausubel, D., & Sullivan, E. Theory and problems of child development (2d ed.). New York: Grune and Stratton, 1970.
- Bentz, W., & Davis, A. Perceptions of emotional disorders among children as viewed by leaders, teachers, and the general public. American Journal of Public Health, 1975, 65(2), 129-132.
- Bentz, W., Edgerton, J., & Kherlopian, M. Perceptions of mental illness among people in a rural area. Mental Hygiene, 1969, 53, 459-465.
- Berg, R. L., Hallauer, D., & Berk, S. Neglected aspects of the quality of life. Acton, Mass.: Health Services Research-Publishing Sciences Group, Inc., 1976. (Vol. 11, no. 4, pp. 391-395)
- Berland, T., & Addison, R. Living with your bad back. New York: Bantam Books, 1973.
- Berlyne, D. E. Conflict, arousal and curiosity. New York: McGraw-Hill, 1960.
- Beverly, B. The effect of illness upon emotional development. Journal of Pediatrics, 1936, 8(5), 533-543.
- Bolin, R. H. Sensory deprivation an overview. Nursing Forum, 1974, 13(3), 240-258.
- Brazelton, T. B., Holder, R., & Talbot, B. Emotional aspects of rheumatic fever in children. Journal of Pediatrics, 1953, 63, 339-358.

- Brown, E. New dimensions of patient care, part 1. New York: Russell Sage Foundation, 1961.
- Cannon, W. F. The wisdom of the body. New York: W. W. Norton & Co., 1939.
- Cantril, P., Botwinick, J., & Storandt, M. Memory, related functions and age. Springfield, Ill.: Charles Thomas, 1974.
- Cassel, J. The relation of the urban environment to health: Towards a conceptual frame and a research strategy. In L. Hinkle, Jr., & W. C. Loring (Eds.), The effect of the man-made environment on health and behavior. Atlanta, Ga.: Center for Disease Control, U.S. Dept. of Health, Education, & Welfare, 1977.
- Chen, E., & Cobb, S. Family structure in relation to health and disease. Journal of Chronic Diseases, 1960, 12, 544-548.
- Christmas, J. J. Psychological stress of urban living. Journal of the National Medical Association, 1973, 65, 483-486.
- Cosgriff, J., & Anderson, D. The practice of emergency nursing. Philadelphia: Lippincott, 1975.
- Croog, S., Lipson, A., & Levine, S. Help patterns in severe illness: The role of kin network, non-family resource, and institutions. Journal of Marriage and the Family, 1972, 34, 32-41.
- DeGowin, E., & DeGowin, R. Diagnostic examinations. New York: The Macmillan Co., 1969.
- Dorland's medical dictionary (25th ed.). Philadelphia: W. B. Saunders, 1974.
- Dubo, S. Psychiatric study of children with pulmonary tuberculosis. American Journal of Orthopsychiatry, 1950, 20, 520-528.
- Dubos, R. Mirage of health. New York: Harper & Row, 1959.
- Dubos, R. Man adapting. New Haven: Yale University Press, 1965.

- Erikson, E. Childhood and society. New York: W. W. Norton & Co., 1950.
- Etzwiler, D. What the juvenile diabetic knows about his disease. Pediatrics, 1962, 29(135), 604-607.
- Field, M. Patients are people. New York: Columbia University Press, 1958.
- Flaskerud, J. Perceptions of problematic behavior. Nursing Research, 1980, 29(3), 140-149.
- Fox, R. Sociologic overview of organ transplant and hemodialysis in medicine and society. Contemporary medical problems (Vol. 4). Philadelphia: American Philosophical Society Library, 1971.
- Gellert, E. Children's conception of the content and function of the human body. Genetics and Psychology Monographs, 1962, 65, 293.
- Gibson, J. The senses considered as perceptual systems. Boston: Houghton Mifflin, 1966.
- Gips, C. How illness experiences are interpreted by hospitalized children. Unpublished doctoral dissertation, Columbia University, 1956.
- Gowan, N. The perceptual world of the intensive care unit. Heart and Lung, 1979, 8(2), 340-344.
- Graham, S., & Reeder, L. Social factors in the chronic disease. In H. Freeman, S. Levine, & L. Reeder (Eds.), Handbook of medical sociology. Englewood Cliffs, N.J.: Prentice-Hall, 1972.
- Hadley, B. J. A review of current concepts of health and illness for becoming well: A study of role change. Unpublished manuscript, U.C.L.A., 1964.
- Haggerty, R. T., & Meyer, R. J. Streptococcal infections in families: Factors altering individual susceptibility. Pediatrics, 1969, 29(3), 539-544.
- Hall, E. The hidden dimension. Garden City, N. Y.: Doubleday & Co., 1966.

- Helmholtz, H. Von. [Treatise on physiological optics.] (Vol. 3; trans., J. P. C. Southall.) New York: Dover, 1962.
- Hetherington, R. W., & Hopkins, E. Symptoms sensitivity: Its social and cultural correlates. Health Services Research. Acton, Mass.: Publishing Sciences Group Inc., 1968. (Vol. 4, no. 63, pp. 421-432)
- Hinkle, L. E. Effect of exposure to cultural change, social change, and change in interpersonal relationship on health. In B. Dohenwend (Ed.), Stressful life events: Their nature and effect. New York: John Wiley & Sons, 1974.
- Hinkle, L. E., & Wolff, H. The nature of man's adaptation to his total environment and the relation of this to illness. Archives of Internal Medicine, 1957, 99, 442-446.
- Hochberg, J. Perception. Englewood Cliffs, N.J.: Prentice-Hall, 1978.
- Holmes, T., Hawkins, N., Bowerman, C., Clarkes, E., & Jaffe, J. Psychosocial and psychophysiological studies of tuberculosis. Psychosomatic Medicine, 1957, 19, 134-142.
- Holmes, T., & Rahe, R. The Social Readjustment Rating Scale. Journal of Psychosomatic Research, 1967, 11, 213-218.
- Hurlock, E. Child development (5th ed.). New York: McGraw-Hill, 1972.
- Inglefinger, R. The wisdom of the body, reconsidered. Human Nature, 1978, 1(28), 122-128.
- Jersild, A. T. Child psychology. Englewood Cliffs, N.J.: Prentice-Hall, 1968.
- Koos, E. L. The health of Regionville: What people thought and did about it. New York: Columbia University Press, 1954.
- Koos, E. Sociological studies in health and sickness. New York: McGraw-Hill, 1960.

- Larson, Sister P. Nurse perceptions of patient characteristic. Nursing Research, 1977, 26(6), 416-421.
- Luckmann, J., & Sorensen, K. Medical-surgical nursing--a psychophysiologic approach. Philadelphia: W. B. Saunders, 1980.
- Lynn, D., Glaser, H., & Harrison, G. Comprehensive medical care for handicapped children 3: Concepts of illness in children with rheumatic fever. American Journal of Disease of Children, 1962, 103(2), 42-50.
- Maier, H. W. Three theories of child development. New York: Harper & Row, 1965.
- Marlens, H. A study of the effect of hospitalization on children in a metropolitan institution. Unpublished doctoral dissertation, New York University, 1959.
- Maslow, A. H. Toward a psychology of being. New York: Van Nostrand Reinhold Co., 1968.
- Masuda, M., & Holmes, T. H. The Social Readjustment Rating Scale: A cross cultural study of Japanese and Americans. Journal of Psychosomatic Research, 1967, 22, 34-40.
- Mechanic, D. The concept of illness behavior. Journal of Chronic Disease, 1962, 15, 189-194.
- Mechanic, D., & Volkart, E. H. Stress, illness behavior and the sick role. American Sociological Review, 1961, 26(5), 188-193.
- Mendez, L., Goodwin, T., Yeaworth, R., & York, J. Factors influencing adolescents' perception of life change events. Nursing Research, 1980, 29(6), 384-389.
- Menninger, K. The vital balance. New York: Viking, 1963.
- Meyers, T., Lindenthal, J., & Pepper, M. P. Life events, social integration, and psychiatric symptomatology. Journal of Health and Social Behavior, 1975, 16, 421-430.
- Miller, F. W. Growing up in Newcastle-upon-Tyne. London: Oxford University Press, 1960.

- Nyberg, J. Perception of patient problems in the emergency department. Journal of Emergency Nursing, 1978, 1, 15-19.
- Oatley, K. Perceptions and representations. New York: The Free Press, 1979.
- Paffenbarger, R. S., Laughlin, M. E., Giman, A. S., & Black, R. A. Work activity of longshoremen as related to death from coronary heart disease and stroke. New England Journal of Medicine, 1970, 282, 1109-1113.
- Paskel, E. Life stress, depression and attempted suicide. Journal of Human Stress, 1977, 61, 825-829.
- Paykel, E., Prusoff, B., & Meyers, J. Suicide attempts and recent life events. Archives of General Psychiatry, 1975, 32, 327-334.
- Peters, B. Concepts of hospitalized children about causality of illness and intent of treatment. Unpublished doctoral dissertation, University of Pittsburg, 1975.
- Peters, B. School-aged children's beliefs about causality of illness. Journal of Maternal-Child Nursing, 1978, 7(3), 143-154.
- Petrich, J., & Holmes, T. Life change and onset of illness. Medical Clinics of North America, 1977, 61(954), 831-833.
- Polit, D., & Hungler, B. Nursing research: Principles and methods. Philadelphia: J. P. Lippincott, 1978.
- Poznanski, E. D. Children's response to pain: A psychiatrist's perspective. Clinical Pediatrics, 1976, 15(12), 114-119.
- Rahe, R. H. Recent life changes, myocardial infarction and abrupt coronary death. Archives of Internal Medicine, 1974, 133, 221-228.
- Rahe, R., & Holmes, T. H. Epidemiological studies of life change and illness. International Journal of Psychiatry in Medicine, 1975, 6, 133-140.

- Rahe, R., McKean, J., & Arthur, R. A longitudinal study of life-change and illness patterns. Journal of Psychosomatic Research, 1967, 10, 355-366.
- Richter, H. Emotional disturbances of constant pattern following non-specific respiratory infection. Journal of Pediatrics, 1943, 23, 315-325.
- Roberts, S. Behavioral concepts and the critically ill patient. Englewood Cliffs, N.J.: Prentice-Hall, 1976.
- Robertson, J. Young children in hospitals. New York: Basic Books, Inc., 1958.
- Rogers, M. The theoretical basis of nursing. Philadelphia: F. A. Davis Co., 1970.
- Rubin, R. T., Gunderson, E., & Arthur, R. J. Life stress and illness patterns in the U.S. Navy. Journal of Psychosomatic Research, 1971, 15, 277-288.
- Rutter, B. Children's beliefs about the locus of control in illness situations. Unpublished doctoral dissertation, University of Minnesota, 1969.
- Sales, S., & House, J. Job dissatisfaction as a possible risk factor in coronary heart disease. Journal of Chronic Diseases, 1971, 22, 861-865.
- Saunders, L. Cultural differences and medical care. New York: Russell Sage Foundation, 1954.
- Scheter, M. The orthopedically handicapped child. Archives of General Psychiatry, 1961, 4(3), 247-253.
- Scotch, N. J. A preliminary report of the relations of sociocultural factors to hypertension among the Zulu. Annals of the New York Academy of Science, 1963,
- Shekelle, R. B., & Ostfeld, A. M. Social status and incidence of coronary heart disease. Journal of Chronic Diseases, 1969, 22, 381-384.
- Solley, C., & Murphy, G. Development of the perceptual world. New York: Basic Books, 1960.

- Stephens, G. The time factor. Should it control the patient's care? American Journal of Nursing, 1965, 65(1), 72-84.
- Stratman, W. C., & Ullman, R. A study of consumer attitudes about health care. The role of the emergency room. Medical Care, 1975, 13(12), 1033-1043.
- Suchman, E. Sociology and the field of public health. New York: Russell Sage Foundation, 1963.
- Sweetser, D. How layman define illness. Journal of Health and Human Behavior, 1960, 1, 219-225.
- Taylor, D. E. Problems of patients in an ICU--the etiology of prevention of ICU syndrome. International Journal of Nursing Studies, 1971, 8, 48-54.
- Thomas, C., & Duszynski, K. Closeness to parents and family constellation in prospective study of five disease states. Johns Hopkins Medical Journal, 1974, 134, 251-270.
- Thurlow, H. J. Illness in relation to life situation and sick role tendency. Journal of Psychosomatic Research, 1971, 15, 73-88.
- Vernon, D., Foley, J., Spiowicz, R., & Schulman, J. The psychological response of children to hospitalization and illness. Springfield, Ill.: Charles C. Thomas, 1965.
- Vinokur, A., & Selzer, M. Desirable versus undesirable life events: Their relationship to stress and mental distress. Journal of Personality, 1975, 32, 329-337.
- Volicer, B. Patients' perceptions of stressful events associated with hospitalization. Nursing Research, 1974, 23(3), 235-238.
- Walker, A. L. Why do patients use the emergency room? Hospital Topics, 1975, 53, 19-21.
- Webb, M. L. Factors involved in increased use of hospital emergency departments. Emergency Services. New York: American Hospital Association, 1973.

- Weinberger, M., Greene, J., & Marlism, J. Patient perceptions of health care at a university based ambulatory care clinic. The Journal of Ambulatory Care Management, 1981, 2, 55-64.
- Weiner, C. L. Pain assessment on an orthopedic ward. Nursing Outlook, 1975, 23(8), 508-516.
- Williamson, Y. Methodologic dilemmas in tapping the concept of patient needs. Nursing Research, 1978, 27(1), 172-177.
- Wu, R. Behavior and illness. Englewood Cliffs, N. J.: Prentice-Hall, 1973.
- Wyler, A. R., Masuda, M., & Holmes, T. H. The seriousness of illness rating scale: Reproductivity. Journal of Psychosomatic Research, 1970, 14, 59-62.
- Zborowski, M. Cultural components in responses to pain. Journal of Social Issues, 1952, 8, 16-30.