HOSPITALIZED PATIENTS' KNOWLEDGE OF MEDICAL VOCABULARY AND THEIR PERCEPTIONS OF COMMUNICATION EFFECTIVENESS BETWEEN THEMSELVES AND NURSES

A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF MASTER OF SCIENCE

IN THE GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

COLLEGE OF NURSING

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DENTON, TEXAS

MAY 1978

The Graduate School

Texas Woman's University

Denton, Texas

April 3 1978

We hereby recommend that the thesis prepared under our supervision by Lanell Vergara

entitled "Hospitalized Patients' Knowledge of Medical Vocabulary and Their Perceptions of Communication Effectiveness Between Themselves And Nurses"

be accepted as fulfilling this part of the requirements for the Degree of Master of Science.

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Dedication

Amor es la meta. Amor es el camino

Que Las Estrellas Del Cielo
Iluminen Nuestro Camino
Y Que Los Dos De La Mano
Formemos Nuestro Propio Destino

To Carlos, my husband, may these words always hold their special, shared meaning for us both. Thank you for your constant support and guidance throughout this endeavor.

Acknowledgements

A special thank you is extended to the following individuals:

The thesis committee -

Anna Y. Burkhard, R.N., M.S. - for her confidence in me and her motivation skills throughout my degree program

Frances H. Ansley, R.N., M.S. - for the time she invested and her encouragement

Cheryl Anderson, R.N., M.N. - for her sharing of unique insights about the study

Juanita Malina - for her expertise and flexibility

Mona M. Counts, R.N., Ph.D. - for her sharing of knowledge

Robert F. Smith, Ph.D. - for his services as a statistical consultant

Joyce Goza, R.N., M.S. and Wilma S. Carpentier, R.N., M.S. - for their assistance in initiating the study

Norma Selvidge, Ph.D. - for her model skills as a facilitator of communication

Mary E. and Wilbur Woods, my parents, and special significant others for their positive thoughts.

LANELL C. VERGARA

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CHAPTER I

Introduction

Communication is the exchange of meanings among individuals. Through the medium of communication, relationships begin and develop. The ability of the individuals involved to communicate to one another their ideas, goals, and feelings may determine the success of the relationship. The nurse-patient relationship is one which depends on the clear, precise, and complete transmission and reception of information.

Nurse-patient communication consists of exchanging meanings between a sender-encoder and a receiver-decoder. The nurse as the sender-encoder initiates sending a message to another individual. The patient as the receiver-decoder is the individual who receives the message. The sender of the message, the nurse, has the primary responsibility for making the message understood. Effective nurse-patient communication occurs when both sender and receiver have identical meanings for the message sent. Nurses are beginning to recognize and to accept the responsibility for being effective communicators.

There exist many barriers to verbal communication between nurse and patient which may impede or prevent effective communication. One communication barrier that

may occur is the result of differences in patients' abilities to comprehend medical terminology. This barrier may operate to prevent effective communication if nurses fail to consider that medical terminology may not be understood by patients. It may be necessary for nurses to identify for patients the proper meanings of words or statements in the contexts in which they are used. The ability or inability of patients to understand words commonly used in the health care delivery system may affect their overall perception of the effectiveness of communication between themselves and nurses. Therefore, the area of investigation in this study focused on the above-stated relationship.

Statement of the Problem

The problem studied was: What relationship, if any, can be identified between the medical vocabulary knowledge of hospitalized patients and their perceptions of the effectiveness of communication between themselves and nurses?

Statement of the Purposes

The purposes of this study were:

1. To assess the medical vocabulary knowledge of a sample of hospitalized patients

2. To determine patients' assessments of the effectiveness of their communication with nurses
3. To examine what relationship, if any, can be identified between the medical vocabulary knowledge of hospitalized patients and their perceptions of the effectiveness of communication between themselves and nurses

Background and Significance

An important role of the nurse is to function as a facilitator of communication. The nurse and the patient interact within the framework of a highly specialized interpersonal relationship for the purpose of assisting the patient to achieve his optimum level of well-being. It is through effective nurse-patient communication that this purpose can be attained (Bernstein, Bernstein, and Dana 1974, p. 2). It is now recognized that proficiency in the use of communication skills is not an automatic process, but rather that it is an area that necessitates both acquisition and demonstration of skills. Bormann (1969, p. 7), for example, states that effective communication is a skill or art that must be continuously practiced, developed, and

evaluated. One's degree of expertise in communication may facilitate or impede the kind and quality of nursing care delivered.

Communication is concerned with the transmission of meaning. Kron (1972, p. 27) refers to a "triangle of meaning," a concept developed by Ogden and Richards in their book, The Meaning of Meaning. The idea behind this concept is that for communication to be effective, the original meaning of the sender must be identical to the meaning of the message as interpreted by the receiver.

The ability of a sender to encode effective messages depends upon his knowledge, level of cognitive development, attitudes, socio-cultural influences, and skills in speaking and nonverbal communication. The success of a receiver in decoding the messages depends on the preceding factors in addition to his skills in listening and perception (Berlo 1960, p. 50). Transmission of a message from a sender to a receiver is only one part of the communicative process--a process that is complete only when feedback occurs. In feedback the receiver conveys his interpretation of the message transmitted back to the sender. According to Ruesch (1961, p. 454) communication may be considered complete when the message is understood by the receiver in the approximate manner in which the sender intended. The message may be considered incomplete

when the receiver derives a meaning other than that intended by the sender.

Nurses' awareness of possible barriers to communication is the initial step in achieving effective communication. Subsequent investigation and evaluation of the importance of factors interfering with effective nurse-patient communication are needed.

In nurse-patient relationships one known cause of communication breakdown, the failure to effectively communicate, is that the message sent is not received (Travelbee 1969, p. 94). Stated another way, to understand a message the receiver must often interpret it. If it is not correctly interpreted or "received," effective communication has not occurred. The reason a message sent is not received is failure to convey meaning accurately from encoder to decoder, nurse to patient. This can occur if the nurse does not recognize that words mean different things to different people (Kron 1972, p. 32). It is estimated that people commonly use about 800 words, and that these words may have more than 15,000 meanings (Evans 1971, p. 103). One consideration may be that words that are commonly used in the health care delivery system such as injection or catheterization may not be understood or may be misunderstood by patients. It is essential for nurses to identify and clarify for patients the proper meanings of words or

statements in the contexts in which they are used. Nurses functioning as facilitators of communication should take the initiative for making sure the message is understood by the patient. To have the message interpreted in the same context requires a meeting of minds between the sender and receiver (Munn 1977, p. 6).

That the language used by members of the health care delivery team is not always comprehensible to patients is shown by the following three examples. One group of researchers found that many patients in their study did not know the meaning of fifty common terms related to health and illness--vomit, rash, and constipation, for example. In fact, no patient knew all fifty words (Samora, Saunders, and Larson 1961, p. 87). A student nurse reported this disparity in vocabulary. In preparing a patient for electroshock therapy, she asked, "Do you have dentures?" The patient replied, "No, I have schizophrenia" (Bernstein, Bernstein, and Dana 1974, p. 107). On some occasions, the doctor's questions are simply not understood by the patient: D: Have you ever had a history of cardiac arrest in your family? P: We never had no trouble with the police. D: How about varicose veins? P: Well, I have veins, but I don't know if they're close or not (Shuy 1976, p. 376).

Additional support for the premise that failure to convey meaning accurately in nurse-patient interactions is one important factor in impeding or preventing effective communication is the cognitive hypothesis of Ley and Spelman (Ley 1976, p. 82). This hypothesis states that for communication to be effective the message it contains must be understood and remembered and that many failures in communication are caused by simple failures of comprehension and memory (Ley 1976, p. 82). Without feedback from patients validating their comprehension of information communicated to them, nurses have no assurance that the message sent has been received.

Effective nurse-patient communication becomes increasingly more difficult to achieve as the gap in the knowledge of normal and pathological processes widens between health professionals and even well informed consumers (Peitchinis 1977, p. 2). As attainment of communication effectiveness increases in difficulty, it correspondingly increases in importance. The reason for this is that as patient-consumers become more aware that the focus of health care is prevention they become more involved in determining their own care. To be active participants in developing their plans of care patients need to be provided with accurate information concerning their diagnosis, treatment, and prognosis in terms they can understand. Barriers

to communication such as misunderstanding and lack of understanding by the patient-consumer may possibly lead to noncompliance and general dissatisfaction with care delivered (Ley 1976, p. 84).

Because quality nurse-patient communication is assuming increasing importance, barriers to it need to be identified. This study investigated if a relationship could be identified between the medical vocabulary knowledge of hospitalized patients and their perceptions of communication effectiveness between themselves and nurses.

Question

Can a relationship, if any, be identified between the medical vocabulary knowledge of hospitalized patients and their perceptions of the effectiveness of communication between themselves and nurses? One hypothesis was examined and is as follows:

H_o There is no statistically significant difference between the medical vocabulary knowledge of patients and their perceptions of the effectiveness of communication between themselves and nurses.

Definition of Terms

The following definitions were used in this study:

Nurse - A registered nurse currently licensed and practicing in the State of Texas in the medical-surgical area of health care

Patient - A hospitalized individual, eighteen years of age or older, not classified as seriously ill or very seriously ill (Appendix A), who is able to read, write, and speak English, and who does not have an uncorrected speech, hearing, or visual impairment

Communication - The exchange of meanings among individuals

Nurse-Patient Communication - The exchange of meanings between a sender-encoder and a receiver-decoder

Effective Communication - Nurse-patient communication in which both sender and receiver have identical meanings for the message

Communication Barriers - Anything that impedes or prevents the exchange of identical meanings between nurse-encoder and patient-decoder

Limitations

The following variables may have influenced the results of this study, but were not controlled for by design:

1. The Hawthorne effect
2. Time, money, and one investigator
3. Collection of data in one setting
4. Patients' previous contact with nurses and the health care delivery system; i.e., acquisition of medical knowledge through some form of exposure--occupation, friendship.
5. The exchange of meanings by other transmission signals, i.e., nonverbal communication
6. Time required toward progression to health; i.e., participants' levels of wellness may have influenced their perception of communication

The following variables may have influenced the results and were not controlled for by design, but are described:

1. Patients' educational backgrounds, ages, ethnic group memberships, and sex
2. Patients' previous hospitalizations (not identified in thesis proposal)

Delimitations

The variables that were controlled for by design are:

1. All patients met the criteria outlined in the study
2. No patients' family members were included in the study
3. Data collection began between the time of hospital admission and three days after admission
4. Partial control over data collection through use of tape recorder and patients being in private rooms
5. Administration of tools to all participants at the same time each day with a one-hour time limit

Assumptions

Two assumptions were made for the purposes of this study:

1. All responses were truthful
2. All patients had communicated with registered nurses

Summary and Overview

The role of the nurse as a facilitator of communication involves ensuring that patients receive the information they require and desire because identification of barriers to communication between nurses and patients is necessary. In order to investigate one factor that may operate to prevent effective nurse-patient communication, a descriptive study was done to determine what relationship, if any, could be identified between the medical vocabulary knowledge of hospitalized patients and their perceptions of the effectiveness of communication between themselves and nurses.

A report of this study is contained in the succeeding four chapters. Chapter II is a review of the literature relevant to the area of inquiry under study. Four major topics of verbal nurse-patient communication are identified and described. In Chapter III, Procedure for Collection and Treatment of Data, a description of the methodology utilized in the study is presented. The chapter is divided into six principal sections: Introduction, Setting, Population, Tools, Data Collection, and Treatment of Data. Each section contains a description of the actual events of data collection as they occurred. Chapter IV consists of an analysis of the data collected in this study. The results of the study and an interpretation of the findings and the

statistics used are described here. Chapter V, the final chapter of the thesis, consists of four parts as follows: a summary of the entire study, conclusions that can be derived from the study, implications of the study results, and recommendations for further study.

CHAPTER II

REVIEW OF LITERATURE

This chapter is a review of the literature relevant to the area of inquiry under study. Those topics significant to verbal nurse-patient communication are identified and expanded in the following order: the importance of communication in the nurse-patient relationship; effective nurse-patient communication as the exchange of identical meanings between nurse-encoder and patient-decoder; word comprehension as a barrier to effective communication; and communication effectiveness and the patient-consumer.

The Importance of Communication in the Nurse-Patient Relationship

The nurse-patient relationship is initiated and developed through the medium of communication (Bernstein, Bernstein, and Dana 1974, p. 2). The nursing profession recognizes the importance of effective nurse-patient communication (Sundeen, Stuart, Rankin, and Cohen 1976, p. 68). In the education of nursing students and the continuing education of registered nurses, the acquisition of communication skills is receiving increased emphasis.

The quality of patient care is facilitated by effective nurse-patient communication.

Communication is one of the key concepts in nursing. Recognition of the importance of communication in the nurse-patient relationship is demonstrated in nursing literature. Examples of this include the following: Smith (1964, p. 70) states that the science of communication is more pertinent to nursing that the science of disease or pathology.

> Communication skills are as important as any other skills that the members of a helping profession such as nursing must acquire. Professional practice is a social process and as such is basically a matter of communication (Tarasuk, Rhymes, and Leonard, 1965, p. 118).

The significance of communication in the nurse-patient relationship is cogently expressed by Lewis (1973, p. 2) in the following statements:

> The scientific knowledge we possess regarding the broad spectrum of health and illness is of little value if we are unable to interact with our patients. The basis of all of our interactions rests on our ability to communicate with our patients. We have a moral obligation to learn to communicate effectively.

The primary goal of the nurse-patient relationship is the optimal well-being of the patient (Bernstein, Bernstein, and Dana 1974, p. 2). Effective nurse-patient communication is the means to achieve this goal. Because the quality of communication directly influences the

quality of the relationship, it is essential that nurses develop and perfect their skills as facilitators of communication. In the delivery of health care the nurse may be the only individual caring for the patient who can act as an intermediary between the patient, his family, and the rest of the health care team. The nurse must develop the ability to communicate in such a way that "the client understands what is said, the nurse understands what the client is saying, and the health team comprehends what both are saying" (Bower 1972, p. 61).

The fact that nurses recognize the importance of communication in the nurse-patient relationship does not assure that they will become effective communicators. The nursing profession has shown awareness that proficiency in the use of communication skills is not an automatic process. According to Senescu (1974, p. xv),

> . . . as one reviews changing curricula in . . . Nursing Schools around the country, there is gratifying evidence that the teaching of communication skills is receiving ever-increasing emphasis.

Teaching the skills of communication will no longer be overlooked in nursing education. Nevertheless, for a nurse to become an effective communicator is not an easy accomplishment. O'Brien (1974, p. 23) emphasized this fact in the following statements:

> Success in verbal communication cannot be taken for granted. The skill of communicating verbally is never complete; rather it is one that is constantly being perfected as a person lives and responds to people and situations.

A nurse's degree of expertise in communication may facilitate or impair the kind of nursing care delivered (Hein 1973, p. 22). The quality of a nurse's communication with patients may determine the degree to which she can be of help to the patient. Thus, nurses have a special need to develop and perfect their communication skills because the effectiveness of the nurse-patient relationship depends on the quality of communication achieved.

Effective Nurse-Patient Communication - The Exchange of Identical Meanings

Communication can be defined in a number of different ways. Nevertheless, the purpose of any communication is to achieve shared meanings (Burgoon 1974, p. 6). The definition of communication used in this study is the exchange of meanings among individuals. Nurse-patient communication is effective when both sender and receiver have identical meanings for the message sent. While the modes of communication are many, much of nurse-patient communication occurs verbally--face to face. This study is confined to investigation of verbal nurse-patient

communication. Through feedback from patients nurses can determine whether or not the communication exchange has been effective.

Communication theory states that there are five essential elements of communication: 1) a sender, 2) a receiver, 3) a message, 4) a channel of transmission, and 5) a response or effect (Rickelman 1971, p. 398). The nurse as the sender-encoder initiates sending messages to the patient who is the receiver-decoder. The nurse as the sender of the message must determine if the patient understands what she is trying to convey. The responsibility for making the message understood is primarily the responsibility of the sender (Munn 1977, p. 6). Effective nurse-patient communication occurs when both sender and receiver have identical meanings for the message sent.

Communication is concerned with the transmission of meaning. Kron, in Communication in Nursing (1972, p. 27), discussed this concept as described by Ogden and Richards in The Meaning of Meaning where (a) is equal to the original meaning, (b) the various signs or symbols used in sending the message, and (c) is the meaning of the message as interpreted by the receiver. These three elements are referred to as "the triangle of meaning" (Figure 1).

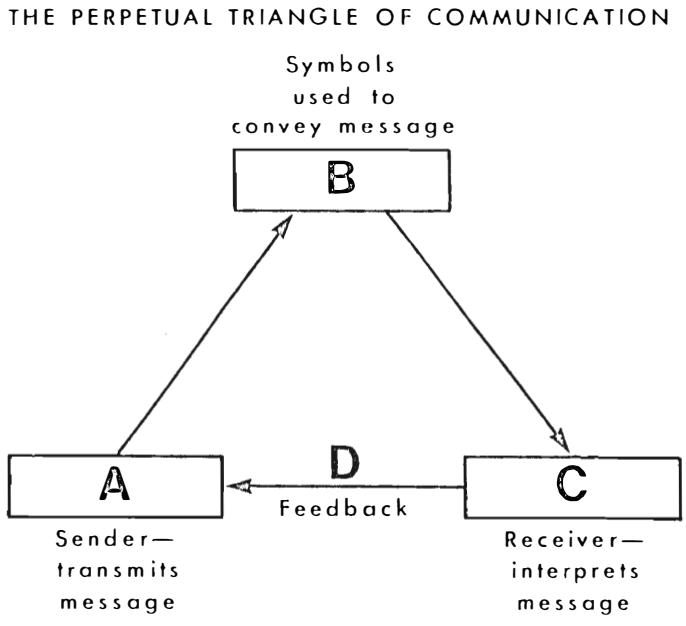

Figure 1. The Triangle of Meaning

(Redrawn from Kron 1972, p. 28)

Effective communication, or mutual understanding, requires that C = A. In other words, meaning as apprehended by the receiver must be identical to the original meaning of the sender. In effect, if this meaning is not a shared one, $C \neq A$, a breakdown in communication occurs.

The following quote is employed to explain this concept further.

> Communication is a function of common meanings, the overlapping of the perceptual fields of communicator and communicatee. It is a matter of acquiring common 'maps' so that the meaning existing for one person may exist for others as well (Combs, Avila, and Purkey 1971, p. 249).

Each individual brings much of himself to the communication process. The manner in which nurses and patients communicate depends on many factors which include education, culture, self-concept, level of wellness, and life experiences. The ability of a sender to encode effective messages depends upon his knowledge, attitudes, socio-cultural influences, and skills in speaking and nonverbal communication. The success of a receiver in decoding the messages depends on the preceding factors in addition to his skills in listening and perception. Schramm (1971, p. 13) informs us that communication comes from the Latin "communis," common. When we communicate, we are trying to establish a "commonness" with someone. A model by Schramm illustrates this point (Figure 2).

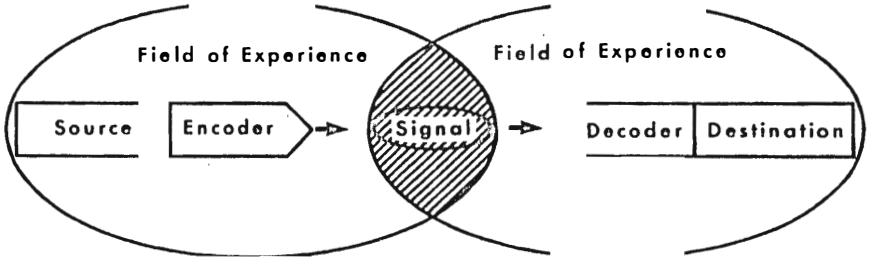

Figure 2. The Commonness Model of Communication

(Redrawn from Schramm 1971, p. 13)

The circles represent the accumulated experience of two individuals trying to communicate. The source can encode, and the destination can decode, only in terms of the experience each has had. If the circles have a large area in common, then communication is easy.

> If the circles have only a small area in common--that is, if the experiences of source and destination have been strikingly unlike--then it is going to be very difficult to get an intended message from one to the other (Schramm 1971, p. 16).

The nurse-encoder and patient-decoder with a small area in common can achieve the exchange of identical meanings only when the nurse is knowledgeable in the application of communication skills.

Feedback

Without feedback from the receiver, the sender of a message cannot assess whether or not effective communication has occurred. Feedback refers to the process by which a sender of a message is able to confirm that the message has been received (Kron 1972, p. 30). When feedback is either sparse or nonexistent, communication may be hampered severely, since there is little measurement of its effectiveness (Skipper 1965, p. 57).

The nurse must be cautious not to elicit biased feedback from the patient. This phenomenon can be explained thus: In the professional nurse-patient relationship there is an inequity--the nurse has more power and is in control; the patient is somewhat dependent. When there is a power imbalance the person with more power will often get biased or safe feedback. The low power person, in effect, tells the high power person what he wants to hear (Selvidge 1977). This point is illustrated by Munn (1977, p. 6) when he states that nurses should never ask patients, "Do you understand?" In a sense this calls for a predisposed answer (biased feedback), and all of the weight is on the patient to answer yes. Rather, the nurse should ask, "What do you understand?" The patient should then repeat to the satisfaction of the nurse what has been said.

Nurse-patient communication consists of exchanging meanings between a nurse who is a sender-encoder and a patient who is a receiver-decoder. Effective nurse-patient communication occurs when both sender and receiver have identical meanings for the message sent. Feedback is the mechanism available to nurses to validate that patients receive an identical message to the one conveyed.

Word Comprehension as a Barrier to Effective Communication

There is a whole range of factors which may operate as barriers to effective nurse-patient communication (O'Brien 1974, p. 21). Awareness by nurses that such barriers do exist is a prerequisite to the attainment of effective communication. Through investigation and evaluation of identified barriers, nurses may determine their actual importance in preventing effective nurse-patient communication.

One recognized barrier to effective communication is that the message sent is not accurately received by the decoder (Hein 1973, p. 139). More precisely, the encoder's message is not interpreted correctly by the receiver-decoder. The reason that a message sent is not received is failure to convey meaning accurately from encoder to decoder, nurse to patient (Travelbee 1969, p. 94). This communication barrier may occur as the result of differences in patients' abilities to comprehend medical terminology. Effective communication may be prevented by this barrier if nurses fail to consider that medical terminology may not be understood by patients. It is essential for a nurse to tailor her messages for the intended receiver in order to achieve accurate, effective communication.

Mehrabian and Reed (1968, p. 365) define communication accuracy as the extent to which the meaning a receiver ascribes to a message is similar to the meaning the sender attempted to convey. These two communication theorists have formulated a hypothesis of communication accuracy (Mehrabian and Reed 1968, p. 366) which states that the accuracy of a communication is directly correlated with the communicator's or addressee's level of cognitive development and is determined by the lower of the two levels. Given that the nurse has the higher level of cognitive development, the act of communicating with patients requires careful selection and utilization of words by the nurse so that the message sent will be correctly received.

The nurse's choice of words may facilitate communication or it can be the cause of the barrier described above (O'Brien 1974, p. 26).

> It is the nurse's responsibility. . . . to plan her selection of words so that they will be understood by the patient exactly as the nurse intends them to be understood (Bermosk and Mordan 1964, p. 112).

It may be necessary for nurses to intentionally select simple words so that patients can understand the meaning conveyed.

According to Cope (1968, p. 64),

> . the more precise and specific the meaning of a word, the better the communication between speaker and hearer. . . . If all the words mean the same to both, the communication should be perfect. A word that permits confusion inserts uncertainty into the communication.

For comprehension to take place nurses need to be selective in choosing words which will convey clearly and effectively the meaning desired.

The number of words in the English language is currently estimated to be about 600,000 (Hein 1973, p. 140). Many of the words used in everyday conversation have multiple meanings. Misunderstanding usually occurs because of the terms used and the meanings given to them.

> When involved in communicating. . . . one should be concerned with clarifying the terms expressed so that effective communication will result (O'Brien 1974, p. 26).

It may be necessary for nurses to identify for patients the proper meanings of words or statements in the contexts in which they are used.

Thus, it can be difficult to convey meaning accurately from nurse to patient. Patients' cultural backgrounds, cognitive development, and education act to determine their levels of understanding and their levels of vocabulary skills and abilities. The language of medical terminology and the mysticism surrounding it are not understood by the average patient (Gorton 1970, p. 59). The world of nursing involves complex technical language used automatically by its practitioners. Commonly used words in the health care delivery system, while familiar to nurses, may be unheard of or misunderstood by patients.

Health professionals and patients do not share a common vocabulary. The use of "complex, technical language. . can be a communication barrier in interactions with patients" (Hein 1973, p. 138). Bernstein, Bernstein, and Dana (1974, p. 107) state that the use of language that is unclear to the patient can seriously interfere with communication because the patient is being asked to respond to words he does not understand.

Professional Jargon

Nurses must be cognizant of the use of professional jargon with patients by themselves and other health team members.

> Jargon is 'shop talk.' The language of a specific occupation. . . . which for the most part, is not understood by an outsider (Kron 1972, p. 20).

The widespread use of jargon by health professionals is documented in the literature. According to Robertson and Heagarty (1975, p. 92),

> . . . there is one problem. . . that occurs regularly. Physicians. . . explain matters to their patients in medical jargon, which is a language foreign to the patient of any social class.

Tape recordings of physician-patient conversations in which the physician is explaining the patient's condition reveal enormous, if nondeliberate, use of technical

language that the patient would have no reason to understand. Shuy (1976, p. 365) states that the medical interview is often carried out in language which has been described by several members of the medical profession as a peculiar and technical jargon. Korsch, Gozzi, and Francis (1968, p. 862) in a study of 800 taped interviews of physicians with pediatric patients found that an outstanding communication barrier in more than half the recorded cases was the pediatrician's use of difficult, technical language.

Reports of information on patient comprehension of words can be found in nursing and related literature. Information about understanding of spoken medical vocabulary was obtained from 125 patients of surgical, gynecologic, and medical services in a publicly-operated general hospital. Participants were asked to give definitions of fifty terms related to health and illness. Some of their misconceptions about the words include the following: (a) appendectomy was defined as a "cut rectum, taking off an arm or leg, something contagious, and something like an epidemic;" (b) germs were defined as "dirt, varmits that grow in the stomach, and things that get on food and poison it;" and (c) a nerve was defined as "something that feeds the blood, vessels in the body that circulate, and something like a pink worm" (Samora, Saunders, and Larson 1961, p. 88).

The study by Korsch et al. (1968, p. 863) describes the misunderstanding of technical terms by the mothers of the pediatric patients interviewed. Lumbar punctures were thought to drain the lungs, meningitis was understood to be located in the throat, and the incubation period was interpreted to be the prescribed time to stay in bed. A survey done to investigate the understanding of verbal communication between health workers and Negro patients (Wise and Miller 1963, p. 7) revealed the following instances of lack of understanding: (a) responses to the term "venereal disease" were pox, polio, cold, and caught from water, and (b) respondents implied a well balanced diet meant they could eat to suit their appetite, eat to lose or gain weight, or to omit salt. A study by Cosper (1977, p. 1933) to evaluate the degree of understanding by hospitalized patients of common hospital terms found the respondents to have the least understanding of the terms NPO, ambulate, emesis basin, force fluids, and void. It is apparent that use of language which is not clear to the patient may seriously impede communication since the patient is asked to respond to words that he does not understand.

Additional support for the premise that failure to convey meaning accurately in nurse-patient interactions is one important factor in impeding or preventing effective

communication is the cognitive hypothesis of Ley and Spelman (1976, p. 82). This hypothesis states that for communication to be effective, the message it contains must be understood and remembered, and that many failures in communication are caused by simple failures of comprehension and memory. Without feedback from patients validating their comprehension of information communicated to them, nurses have no assurance that the message sent has been received.

In summary, the medical words and terms used for nursing procedures may be misunderstood by the patient. It is incorrect for nurses to assume that patients know what is meant by common medical and anatomical terms or by abbreviations and medical jargon. Misunderstanding may occur because of the terms used and the meanings given to them. The nurse must validate the patient's comprehension of the meaning conveyed. It is the nurse's responsibility to clarify the terms used so that effective communication can occur.

Communication Effectiveness and the Patient-Consumer

The delivery of health care is becoming increasingly complex. Patient-consumers are voicing their dissatisfaction with the quality of health care services and are asking for a more active role in determining their own care (O'Brien 1974, p. 102). Effective nurse-patient

communication is even more essential than ever with the focus of health care on health promotion and maintenance and prevention of disease.

Attainment of communication effectiveness is a mutual goal for the nurse-provider and the patient-consumer (Peitchinis 1977, p. 30). The problem of failure by health care workers to communicate effectively with patients is documented in the literature. According to Mumford and Skipper (1967, pp. 127-128) one of the most important aspects of hospital care, from the patient's point of view, is communication with physicians, nurses, and other hospital workers. Lack of what they consider "adequate" communication with hospital personnel is one of the most common and universal complaints of hospitalized patients in Western society. Likewise, another source stated that consumer dissatisfaction with medical care today is primarily due to inadequate communication between patient and physician (Chisari, Nahumura, and Thorup 1976, p. 190). In a study by Shuy (1976, p. 366) some factors which can interfere with effective communication between patient and doctor in the medical interview were identified. A fourteen-item questionnaire was administered randomly to 105 patients at Georgetown University Hospital clinics and private medical practices. The findings included the following: 45 percent of the respondents said they sometimes felt the doctor

did not understand the patient's problem; 38 percent thought that doctors, nurses, or interns sometimes use words that are difficult to understand; and 35 percent stated they would prefer the doctor to speak in simpler language. The need for improved, effective communication between health care providers and their patients is evident.

Effective nurse-patient communication becomes increasingly more difficult to achieve as the gap in the knowledge of normal and pathological processes widens between health professionals and even well informed consumers. As attainment of communication effectiveness increases in difficulty, it correspondingly increases in importance. The reason for this is that as patient-consumers become more aware that the focus of health care is prevention, they become more involved in determining their own care. To be active participants in developing their plans of care, patients need to be provided with accurate information concerning their diagnosis, treatment, and prognosis in terms they can understand. The importance of barriers to communication such as misunderstanding and lack of understanding by the patient-consumer are that they may lead to noncompliance with the health care regimen and general dissatisfaction with care delivered.

The lack of effective communication between the providers of health care and patient-consumers is a problem

recognized by both. Ability of nurses to communicate effectively is becoming increasingly important as they assist patients toward their optimal level of well-being through health promotion, health maintenance, and the prevention of disease.

Summary

This chapter was a review of the literature relevant to the problem under study: What relationship, if any, can be identified between the medical vocabulary knowledge of hospitalized patients and their perceptions of the effectiveness of communication between themselves and nurses? Four major topics of verbal nurse-patient communication were identified and described. The first topic discussed was the importance of communication in the nurse-patient relationship. The next major section to be considered was effective nurse-patient communication--the exchange of identical meanings. This section included the subtopic of feedback. Word comprehension as a barrier to effective communication was the third topic of the chapter, and it included the subtopic of professional jargon. The fourth and last main topic was communication effectiveness and the patient-consumer. The importance of achieving effective nurse-patient communication was further emphasized in this section.

CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

Introduction

This chapter, Procedure for Collection and Treatment of Data, is a presentation of the methodology utilized in this study. The chapter is composed of the six following sections: Introduction, Setting, Population, Tools, Data Collection, and Treatment of Data. A description of the actual events of the data collection as they occurred is included.

The primary aim of descriptive research is to discover new facts (Abdellah and Levine 1965, p. 425). Descriptive research describes what is and analyzes the findings in relation to their significance (Notter 1974, p. 20). Often, descriptive studies provide the basis for a subsequent undertaking of explanatory or experimental research. Descriptive studies "occupy an important place in the total research spectrum" (Abdellah and Levine 1965, p. 426).

A descriptive study was executed in order to investigate one factor that may operate to prevent effective nurse-patient communication. A questionnaire approach was the methodology utilized to determine if a relationship could be identified between the medical vocabulary knowledge of hospitalized patients and their perceptions of the effectiveness of communication between themselves and nurses.

Before implementation of this study, permission was obtained from the thesis committee, the Texas Woman's University Human Rights Committee, the agency, and the patients involved. Patients' agreement to participate in this study were evidenced by their signatures on Form B. Before obtaining written consent, an oral description of the study was given to each participant explaining the procedures involved and the possible risks or benefits to them. At the time the thesis proposal was written, no expected risks or discomforts associated with this study were anticipated. Prior to the implementation of data collection, one potential discomfort or risk was identified: patients' fears of an invasion of their privacy by their questionnaire answers being shared with ward personnel. Confidentiality was insured to each subject by no names being recorded, and by including an additional statement in the oral description of the study that the results would not be shared with any staff members. Participants were told that two

possible benefits of the study were that they might increase their understanding of some medical terms through a post conference, and also that their participation in a research study might be of possible benefit to other patients. All questionnaires were coded to insure participant's anonymity. Participants were advised that if they became physically or emotionally unable to continue in the study that data collection would be stopped. They were further assured that their participation was entirely voluntary, and that they were free to withdraw from the study at any time. A file of participants' informed consent forms was maintained by the investigator.

Setting

This study was conducted on three medical and surgical wards in a 378-bed general military hospital. The three wards contained forty to fifty beds. The hospital serves a population of approximately 120,000. The hospital is located in a central Texas city with a population of 40,000.

The three medical and surgical wards of this agency were utilized as the setting for the study in order to correspond as closely as possible to the setting of the Samora et al. (1961, p. 85) study. That setting consisted of wards of the surgical, gynecological, and medical ser-

vices of a publicly operated general hospital. The hospital's medical ward had a forty-two bed capacity with both male and female patients. A forty-one bed capacity, all-female ward, with patients of the gynecological and surgical services was utilized. A third ward in the setting had a fifty-bed capacity with male surgical patients. Private rooms were utilized for the collection of data in this study.

Population

The population of this study consisted of those patients who met the criteria for a patient set forth in the "Definition of Terms" section, and who agreed to participate in the study. It was anticipated that thirty patients would be the sample selected to participate in the study. Only fifteen patients met the above stated criteria within the four-week time frame of data collection. One patients refused to participate in the study.

The sample on any given day was derived from the population of patients on the medical and surgical wards who had been admitted to the hospital within the past seventy-two hours, and who met the criteria for a patient in this study. In retrospect, five participants were derived from each of the three wards.

Five participants undergoing gynecological surgery were the sample from the all-female ward with patients of the gynecological and surgical services. The one individual who refused to participate in the study was a surgical patient on that ward. The medical ward provided three male and two female participants. The remaining five participants were male surgical patients from the third ward described in the preceding section.

The inpatient population of the agency in this study includes approximately 50 percent Caucasians. The remaining 50 percent of the patients includes 25 percent Blacks, 15 percent Spanish-speaking individuals (primarily Puerto Ricans), and 10 percent Orientals. The Oriental population consists mainly of Koreans, Japanese, and Samoan.

Tools

Two tools were utilized for the collection of data in this study. The first tool assessed the medical vocabulary knowledge of hospitalized patients, and the second tool assessed those patients' perceptions of the effectiveness of communication between themselves and nurses.

The first tool to be administered was a fifty-word sample of commonly used medical terms that was developed by Samora, Saunders, and Larson (1961, p. 86)

(Appendix B). It was originally designed to obtain a measure of the extent to which patients in a public general hospital might be failing to understand the meanings of words frequently used by medical personnel.

The vocabulary list was compiled from words used in patient-physician interviews and believed to be in common use. Highly technical words were not included in the sample, and those words selected were thought to be common enough in general lay usage to permit their being known to many laymen. Content validity in the Samora et al. (1961, p. 84) study was established by an eleven-member expert panel of physicians, residents, and fourth-year medical students. Any words that four or more panel members indicated they would not use in talking to patients were eliminated. Samora et al. then drew a random sample of fifty words from the 131 terms surviving the preliminary screening of the expert panel. These fifty words comprise the vocabulary list that was administered as the first tool in this study. The tool has face validity.

Content validity of Tool 1 was established for the purposes of this study by the administration of the vocabulary list to all nurses and physicians working in the study setting. This was accomplished by devising and administering a questionnaire which asked the registered nurse and physician respondents to indicate those words they ordinarily

use in talking to patients. One hundred percent of thirty-three administered questionnaires were returned. Six words were universally used in speaking with patients by both nurses and physicians--pulse, rash, routine, specimen, symptoms, and vitamins. Four other words were used by all but one respondent, and these were: allergic, constipated, injection, and reaction. The words used by the least number of respondents were: abortion, amputate, autopsy, cerebral, intern, and terminal. To further explain: abortion was primarily used by the gynecologists; amputate was used only by the nurses and physicians on the male surgical ward; autopsy was used by 57 percent of the respondents; cerebral was infrequently used uniformly; intern is a word seldom used in a military hospital; and the word terminal was primarily used by the Internal Medicine physicians.

As mentioned above, Samora et al. in establishing content validity eliminated any words from the vocabulary list that four or more panel members did not use in talking to patients. Four panel members constituted 36.5 percent of the panel members. If this were done in this study, and the words that 36.5 percent or more of the respondents did not use were discarded, the words would include: abortion, acute, amputate, autopsy, cardiac, cavity, cerebral, deficient, deformity, fatal, intern, malignant, splint,

tendon, and terminal. There was no correlation between the words least used by the nurses and physicians, and participants' adequacy of understanding of the terms. It is logical that some words are more frequently used in one setting versus another, i.e., abortion, whereas other words are used universally, such as allergic, appointment, and pulse. The fifty words were used by a range of 69.6 to 100 percent of the 33 respondents in this study.

Reliability of the tool was originally established by administering it first to a group of professionals outside the medical field and then by repeating its administration to a group of twelve nurses, omitting all words that had not achieved 100 percent reproducibility. Reliability was further established through replication of the tool in the implementation of this study.

This tool was administered via taped recording to each participant. Participants were asked to provide written definitions for the fifty medical vocabulary words after hearing each one in the context of a simple sentence. A list of the sentences used is included in the appendix (Appendix C). The sentences were constructed by the investigator and reviewed by two communication experts for clarity and appropriateness (Kerlinger 1973, p. 459). The thesis proposal indicated that four scoring categories would be used: 1) no knowledge of the word, 2) wrong knowledge,

3) vague knowledge, and 4) adequate knowledge of the word. Because Samora et al. (1961, pp. 84-85) reported having difficulty in scoring using these categories, they were refined to two categories for this study. A participant's answer was scored as either adequate or inadequate knowledge of the word. A score of adequate knowledge of a word was given when the response indicated that the participant had a fairly clear idea of the meaning of the term, and was likely to understand it when used in context in the hospital (Samora et al. 1961, p. 85). The investigator's scoring judgments were checked for reliability by two other nurses. Participants' definitions for the terms were checked against the definitions of the words found in the 25th edition of Dorland's Illustrated Medical Dictionary.

The second tool utilized was a twenty-item Likert-type questionnaire developed by Peitchinis (1976, p. 113) (Appendix D) to measure patients' assessments of the effectiveness of their communication with hospital staff. Her study's purpose was to determine whether an intensive one-day instructional program would increase effectiveness of communication as perceived by patients. The tool was used in this study to determine patients' perceptions of the effectiveness of communication between themselves and nurses. The tool has face validity. Content validity was established by Peitchinis with a panel of eleven nursing

service personnel of head nurse or higher level positions, nine nurse educators, and eight registered nurses. Pilot testing of the questionnaire was conducted with a sample of more than fifty subjects by Peitchinis. An item analysis performed on the questionnaire using the correlation between the test item and the total questionnaire score yielded an alpha reliability of .85.

Face and content validity of the second tool was established for the purposes of this study by an expert panel composed of four members who had both an interest in and knowledge of communication in the nurse-patient relationship (Kerlinger 1973, p. 459). Through replication of this tool in data collection in this study, its reliability was further established.

This tool was also administered via taped recording. Only one tape of each tool was used. The reason for utilizing tapes in data collection was to avoid contamination from other communication variables, both verbal and nonverbal. For instance, had the tools been administered verbally by the investigator, the participants' responses to Tool 2 could have been affected, or the investigator's scoring judgments of Tool 1 could have been more subjective than objective. Participants gave their responses to the twenty questions in writing.

The scoring categories for the tool were: 1) Yes, the statement is true of my experience--score positive

(effective) communication; 2) I cannot be sure that the statement is true of my experience--score neutral communication; and 3) No, the statement is not true of my experience--score negative communication.

Prior to the administration of the first tool, each respondent was asked to complete a six item questionnaire to determine demographic characteristics of the population sample. These questions asked for the respondent's age, sex, years of education, race/ethnic group, and whether or not he had previously been hospitalized.

Data Collection

Data collection for this study took place from January 30 to February 28, 1978. An additional week of data collection was necessary beyond the three-week time frame designated in the thesis proposal. Data were collected for this study from a sample of fifteen participants.

Collection of the data from participants occurred in two phases. An identical format was used with each participant. Variations in the procedure utilized are discussed in this section. In Phase I of data collection, contact was made with potential participants, and an oral description of the study was provided. Agreement to participate in the study was then obtained in writing. The

tape recorder was set up for each participant, and conversation was restricted to explaining how to operate the tape recording for the first tool. The Sample Characteristics Questionnaire and the answer sheet for the fifty medical terms were given to each participant. Participants were told at that point that the investigator would be outside the door if they required any assistance. Each participant was alone in a private room while writing his responses to the first tool. Those patients not already in a private room were conducted to an empty room on the ward by the investigator. One participant with hepatitis who did not feel well enough to go to a private room was allowed to complete the medical vocabulary questionnaire in his bed with the curtains drawn. One roommate was in the room during data collection. Phase 1 of data collection for all participants began within seventy-two hours of their hospital admission.

In Phase II of data collection participants were again alone in a private room where they responded in writing to a second taped questionnaire. As in Phase I, the tape recorder was set up for the participants and the second answer sheet given to them. Participants were once again assured that the investigator would be located outside the room and available if the need arose. Phase II of data collection was initiated within seventy-two hours of

termination of Phase I. Data collection was completed on all participants by the end of their sixth hospital day. No patients were discharged before Phase II of data collection began.

An offer of a post conference was made to each participant for the purpose of answering questions or clarifying medical vocabulary meanings. Two participants took advantage of the opportunity of the post conference to increase the clarity and depth of their medical vocabulary knowledge. An interesting finding of the study was the following: Eight participants had questions upon completing Tool 1 and stated they desired a post conference. When the time arrived for the post conference, six declined the opportunity. Questions were deferred until completion of Tool 2 in order to avoid contamination from communication with the investigator. However, because participants were unable to receive immediate feedback about their performance they lost interest. A unique teaching-learning opportunity was thus forfeited.

In order to avoid the threat of maturation to the study's validity, the tools were administered to all participants at the same time of day, from one to four in the afternoon. This time coincided with a slack period in hospital routine and resulted in no interruptions during data collection. A time limit of one hour was allowed for com-

pletion of each tool. Completion times ranged from twenty to fifty minutes per tool.

Treatment of Data

The level of significance for this study was set at $\alpha = .05$. The data collected were analyzed utilizing the chi square. Chi square as a test of independence allows one to make decisions about whether there is a relationship between two variables using frequency data (Welkowitz, Ewen, and Cohen 1971, p. 239). No parametric statistical test was appropriate for the analysis of these data because the sample (N) was <20. The Fisher exact probability test was also used as an additional method of analysis as recommended by Siegel (1956, p. 110).

Summary

In summary, a descriptive study was done from January 30 to February 28, 1978, to determine what relationship, if any, could be identified between the medical vocabulary knowledge of hospitalized patients and their perceptions of the effectiveness of communication between themselves and nurses. A sample of fifteen participants was selected from three medical and surgical wards of a general military hospital. The general procedure for the study was the following: An oral description of the study

was given to all participants. Agreement to participate as a volunteer in the study was obtained in writing. Data were collected in two phases with Phase 1 occurring within seventy-two hours of the participant's hospital admission. Participants were alone in a private room where they responded in writing to the taped tools. The investigator was available outside the room to render assistance, if needed. Questionnaires were coded for anonymity. A time limit of one hour for responding to the questionnaires was established and adhered to. Data were analyzed utilizing the chi square and the Fisher exact probability test. Level of significance was set at $\alpha = .05$.

CHAPTER IV

ANALYSIS OF DATA

Introduction

The purposes of this study were: 1) to assess the medical vocabulary knowledge of a sample of hospitalized patients, 2) to determine patients' assessments of the effectiveness of their communication with nurses, and 3) to examine what relationship, if any, could be identified between the medical vocabulary knowledge of hospitalized patients and their perceptions of the effectiveness of communication between themselves and nurses. The participants' responses to Tools 1 and 2 were categorized and then analyzed utilizing the chi square. This chapter presents the results of the study and an interpretation of the findings and of the statistics chosen for use in this study.

Description of Sample Population Characteristics

The following section is a description of the characteristics of the sample population obtained for this study. A sample of fifteen participants was derived from

the population of the three medical and surgical wards of the agency utilized. The characteristics of the sample that are described are demographic in nature, and included age, sex, educational backgrounds, race/ethnic groups, and previous hospitalizations. These data are described in Tables 1 and 2.

The participants' ages are summarized in Table 1. The age range of the participants was nineteen to fifty years. The mean age of the participants was 31.4 years, and the median of their ages was 26 years. The majority of the patients were between 19 and 26 years old.

Table 1

Demographic Data of Participants' Ages

Age Range	N	$\bar{x}$
19 - 29	9	22.7
30 - 50	6	40.1
Total	15	31.4

Table 2 describes the remaining demographic data of participants' sex, educational backgrounds, race/ethnic groups, and previous hospitalizations. Eight males and seven females constituted the sample for this study. All males were active duty military members, and all of the

females were dependent wives of active duty servicemen. Twelve participants stated they were high school graduates, while the remaining three patients indicated they had earned a Baccalaureate or higher educational degree. By race/ethnic group, nine participants were Caucasians, and six were Blacks. No other race or ethnic group was represented in this study sample. Information elicited from the participants about previous hospitalizations revealed that four participants had never been hospitalized prior to this admission; another four had been hospitalized before, but not in this agency; and the other seven reported having been hospitalized in this agency in the past.

Categorization and Interpretation of Questionnaire Responses

This section consists of a presentation and an interpretation of participants' questionnaire responses to the two tools utilized for data collection. Tool 1 required participants to provide written definitions for fifty medical vocabulary words. Tool 2, a twenty-item Likert-type questionnaire, was employed to determine patients' perceptions of the effectiveness of communication between themselves and nurses.

Table 2

Demographic Data of Participants' Sex, Educational Backgrounds, Race/Ethnic Groups, and Previous Hospitalizations

	N	Percentage
Sex		
Male	8	53 1/3
Female	7	46 2/3
Educational Backgrounds		
1 - 11 years of school	0	0
High School Graduate	12	80
Baccalaureate or Higher Degree	3	20
Race/Ethnic Groups		
Caucasian	9	60
Black	6	40
Spanish Surnamed	0	0
Other	0	0
Previous Hospitalizations		
No	4	26 2/3
Yes, Same Agency	7	46 2/3
Yes, Different Agency	4	26 2/3

Tool 1

No participant gave an adequate definition for all fifty medical terms in Tool 1. Two words, nasal and negative, were correctly defined by all participants. Participants' scores on Tool 1, the medical vocabulary questionnaire, ranged from 4 to 46 adequate definitions. The mean of the participants' medical vocabulary scores was 32, and the median of the scores was 37. Four words, acute, bacteria, tendon, and tissue were the terms inadequately defined by the largest number of respondents. Table 3 lists the vocabulary words in order of the correctness of response achieved by participants. The number and percentage of adequate and inadequate responses constitute Table 3.

Table 3 showed that of 2500 possible responses, 2243 or 89.72 percent were scored as adequately defined. Two hundred fifty-seven responses or 10.28 percent were scored as inadequately defined. A score of adequate was given to a participant's response when it was judged that the intent of a communicator using that word in the hospital setting could be understood by the participant. Table 3 indicates that a majority of the fifty medical words were in the vocabularies of the participants, even if accurate, technical definitions could not be produced.

Table 3

Correctness of Response to Medical Vocabulary Words

	Adequate		Inadequate	
	Number	Percent	Number	Percent
Nasal	50	100	0	0.0
Negative	50	100	0	0.0
Amputate	49	98	1	2.0
Appointment	49	98	1	2.0
Autopsy	49	98	1	2.0
Cardiac	49	98	1	2.0
Fatal	49	98	1	2.0
Orally	49	98	1	2.0
Respiratory	49	98	1	2.0
Skull	49	98	1	2.0
Symptoms	49	98	1	2.0
Vomit	49	98	1	2.0
Abdomen	48	96	2	4.0
Rash	48	96	2	4.0
Routine	48	96	2	4.0
Deficient	47	94	3	6.0
Sterile	47	94	3	6.0
Terminal	47	94	3	6.0
Cavity	46	92	4	8.0
Cerebral	46	92	4	8.0
Injection	46	92	4	8.0
Isolate	46	92	4	8.0
Mole	46	92	4	8.0
Sedative	46	92	4	8.0
Therapy	46	92	4	8.0
Appendectomy	45	90	5	10.0
Constipated	45	90	5	10.0
Intern	45	90	5	10.0
Pulse	45	90	5	10.0
Specimen	45	90	5	10.0
Swab	45	90	5	10.0
Dilate	44	88	6	12.0
Persistent	44	88	6	12.0
Reaction	44	88	6	12.0
Secretions	44	88	6	12.0
Abortion	43	86	7	14.0
Deformity	43	86	7	14.0
Silent	43	86	7	14.0
Allergic	42	84	8	16.0
Digestion	42	84	8	16.0

Table 3 (continued)

Relieve	42	84	8	16.0
Vitamins	42	84	8	16.0
Germs	39	78	11	22.0
Malignant	39	78	11	22.0
Nerve	39	78	11	22.0
Nutrition	39	78	11	22.0
Acute	37	74	13	26.0
Bacteria	37	74	13	26.0
Tissue	37	74	13	26.0
Tendon	36	72	14	28.0
Total	2243		257	

Some of the participants' inadequate responses are described below. Digestion, nerve, and tissue are three words that several respondents did not attempt to define. When a participant repeated the vocabulary word in his definition without actually explaining the term, a score of inadequate was given. For instance, abortion--abort a baby, deformity--being deformed, tissue--tissue found under the fat skin.

The medical definition of acute is, "having a short and relatively severe course." After hearing the statement, "This is an acute illness," respondents identified acute as happening once, an illness that is obvious, minor illness, hurting, painful, and deep.

Bacteria is defined as, "in general, any micro-organism of the class Schizomycetes," but some participants hearing it in the statement, "The test results show you have bacteria in your urine," indicated the word meant a foreign body in the system, causing disease, particles that should not be in something, and not good for you.

Digestion, "the process or act of converting food into chemical substances that can be absorbed and assimilated," was explained in response to the stimulus question, "How is your digestion?" as the process of running food through your body, how you masticate, and when something goes through the body.

"A cordlike structure, visible to the naked eye, comprising a collection of nerve fibers which convey impulses between the central nervous system and some other body region," is the medical definition of nerve. After hearing the statement, "There has been damage to the nerve," participants defined nerve as sensation, where you can feel, and part of muscle. No definition was attempted by five respondents.

Tendon, "A fibrous cord by which a muscle is attached," was presented in the statement, "The tendon is injured." The term was defined as what holds your bones together, tissue, and cartilage in the arm.

The term "tissue" which is defined as "an aggregation of similarly specialized cells united in the performance of a particular function," was put in the sentence, "There is some tissue damage." Participants variously defined the word as tissue found under the fat skin, flesh, skin, skin part, and what your body is made of.

The preceding section described some of the inadequate medical vocabulary definitions provided by participants in completing Tool 1 of this study. The following section is a categorization and interpretation of the participants' responses to the Perception of Communication Effectiveness Questionnaire which was Tool 2 of this study.

Tool 2

In this study participants almost invariably assessed their communication with nurses as being effective. Possible reasons for these results are considered in this section, along with a categorization of participants' responses.

Table 4 categorizes participants' responses to the Perception of Communication Effectiveness Questionnaire. The numbers under each category, "Yes," "Cannot Be Sure," and "No" are percentages of the participants who responded "1," "2," or "3." All fifteen participants, or 100 percent of the respondents, perceived that items

Table 4

Perception of Communication Effectiveness Questionnaire Responses

Item Number	Yes		Cannot Be Sure		No	
	Number	Percent	Number	Percent	Number	Percent
1	15	100	0	0	0	0
2	15	100	0	0	0	0
3	15	100	0	0	0	0
4	10	66 2/3	5	33 1/3	0	0
5	9	60	6	40	0	0
6	9	60	1	6 2/3	5	33 1/3
7	14	93 1/3	1	6 2/3	0	0
8	9	60	6	40	0	0
9	14	93 1/3	1	6 2/3	0	0
10	14	93 1/3	1	6 2/3	0	0
11	14	93 1/3	1	6 2/3	0	0
12	9	60	2	13 1/3	4	26 2/3
13	10	66 2/3	5	33 1/3	0	0
14	8	53 1/3	7	46 2/3	0	0
15	8	53 1/3	1	6 2/3	6	40
16	15	100	0	0	0	0
17	12	80	1	6 2/3	2	13 1/3
18	8	53 1/3	6	40	1	6 2/3
19	6	40	8	53 1/3	1	6 2/3
20	13	86 2/3	1	6 2/3	1	6 2/3

N = 15

1, 2, 3, and 16 were true. Those participants stated that they felt the nurses, doctors, and other staff were working with them as a team in their recovery, and that they were treated with kindness, courtesy, and respect by all staff. They also believed that the nurses were honest with them, and that their family was informed and consulted about their care. Ninety-three and one third percent of the participants indicated items 7, 9, 10, and 11 were true also. Only four items evoked more than one negative response, and these were 6, 12, 15, and 17. One third of the participants stated they did not know how treatments could affect them. Twenty-six and two thirds percent of the respondents did not believe that the nurse was working with them, as opposed to just doing things to or for them. Item 15 received the highest percentage of negative responses. That is, 40 percent of the sample did not believe the nurse would inform others about their personal needs and preferences, but rather that they would have to tell other staff as the need arose. Thirteen and one third percent of the respondents felt that the nursing staff would not spare the necessary effort in helping them to recover.

Items 5, 8, 14, 18, and 19 were characterized by high percentages of responses in the "Cannot Be Sure" category. Participants were unsure if the nursing staff explained to them what they were going to do during treatments.

Forty percent could not be sure that the nurse understood how they felt. Forty-six and two thirds of the respondents were unsure whether they had the necessary information for taking care of themselves at home. Forty percent responded that they were unsure if they had the opportunity to talk privately with the nurses about their condition. This would indicate that they had not had that opportunity up to that point in their hospital stay. Fifty-three and one third percent of the participants were unsure if they would be taught how to do things for themselves if their condition necessitated a change in former practice or habits.

Despite the overall tendency of the participants to score communication effectiveness highly, a closer inspection of their responses is warranted. Items are considered here in numerical order as they occurred in the questionnaire.

Beginning with item 4, one third of the respondents were unsure if the nurses were willing to explain things to them that they wanted to know. Several interpretations of this finding are possible: that the patient had not thus far required an explanation of anything; that health team members other than nurses had explained things to the patient as the need arose; and that no meaningful nurse-patient communication had occurred up to that point,

and the patient was thus unable to judge whether or not nurses would willingly explain something to them. The responses to item 5 can be interpreted in a similar manner. In this instance, 40 percent of the participants were unsure if the nursing staff explained treatment procedures to them. It is possible, but not likely, that the patient had not required any treatments during his hospital stay, and thus could not be sure if the nursing staff would provide him with explanations. On the other hand, other hospital personnel rather than nurses might have been the ones to explain any treatments to the patients. One third of the respondents stated they did not know how treatments might affect them. This seems to indicate that patients had either been given no verbal explanation of treatment purposes or effects, or the explanations they were given were not understandable to them. Forty percent of the participants also specified that they did not believe the nursing staff understood how they felt. Their replies could be interpreted to mean that other health team members knew their feelings, but the nurses did not, or perhaps that the quantity and/or quality of nurse-patient communication was so limited that the nurses could not really have an understanding of their feelings. Negative responses were given by 26 2/3 percent of the participants to item 12. Participants might have felt that the nurse did things to

them instead of working with them if no actual nurse-patient relationship had been initiated, and/or maintained by means of effective communication. On item 13, one third of the participants stated that they were unsure if they were given explanations about their condition and treatments which they could understand. Seemingly, they were not sure of their understanding of explanations they had been given. Thus, it may have been that no verbal feedback was elicited from those patients regarding the extent of their comprehension of information communicated. Forty six and two thirds percent of the participants were unsure whether they had the necessary information to make plans to take care of themselves at home, according to responses to item 14. A possible interpretation of a reason for the uncertainty is that discharge planning had not yet been discussed in enough detail, or at all, with the patients. Item 15 elicited forty percent negative responses. Two possible considerations are that the patients had found themselves having to repeat the same information to many different staff members because of a lack of intra-staff communication, or that conditions were such that the patients were not sharing their needs and preferences with nurses to begin with. Forty percent of the participants were not sure if they had opportunities to talk privately with nurses about their conditions. This may have been true

because the need had not arisen for a private discussion with the nurse, or because they had discussed their condition when necessary with health team members other than nurses. More than half, 53 1/3 percent, of the participants could not be sure if item 19 was true of their hospital experience or not. Possible interpretations of this are that the statement was worded ambiguously or that none of the patients' conditions had necessitated a change in former practices or habits.

The preceding section was a presentation of participants' responses to the second tool utilized in data collection--Patients' Perception Questionnaire of Communication Effectiveness. There was an unexplained trend for most participants to score communication as highly effective. Possible interpretations of responses other than those scored as effective were presented item by item. The following section is a discussion of possible explanations for the overall trend of participants to uniformly assess their communication with nurses as effective.

One interpretation of the overall trend of the respondents to classify nurse-patient communication as effective might have been the operation of the Hawthorne effect. That is, the knowledge that a study was being done which included their participation might have caused the respondents to change. The effect of the change

could have been the trend for participants to perceive nurse-patient communication as being highly effective.

Another explanation of the participants' tendencies to uniformly assess communication effectively may have been the operation of the risk identified in Chapter III. Participants may have rated communication consistently effective because of fear of staff reprisals if the confidentiality of these responses was not upheld. If patients felt there was a chance that their answers were actually being shared with ward personnel, it is feasible that they would have rated nurse-patient communication as effective whether or not it was.

A third interpretation of the overall trend of respondents to rate nurse-patient communication as highly effective is the following: the tool may have been measuring communication variables other than verbal nurse-patient interaction. For example, even if the participants did not understand the content of their verbal communication with nurses, the nurses may have nonverbally communicated messages of caring and understanding to them. This, then, may have led them to perceive nurse-patient communication as effective, and to score it consistently positive. One consideration is that the tool should have contained only statements pertaining to verbal nurse-patient communication such as items 4 through 7, 13, 18, and 20.

A final explanation of the above described trend is that participants assessed nurse-patient communication as generally effective because it was effective. The nurses may have communicated with patients in language they could understand and may have satisfied those patients' needs. A limitation of this study was that data were collected in one setting. Had data been collected in more than one agency, the trend to perceive nurse-patient communication as highly effective by this sample might have been easier to interpret.

The preceding section was a discussion of some possible interpretations which may have accounted for the overall tendency of participants to score communication highly on Tool 2. The following section is a presentation of the statistics utilized in this study for analysis of data collected. Statistical tables accompany the text.

Statistical Analysis of Data Collected

The level of significance for this study was set at $\alpha = .05$. The chi square and the Fisher exact probability test for data analysis were utilized. No parametric statistical test was appropriate for analysis of these data. Chi square as a test of independence was utilized to determine whether there was a relationship between the variables of hospitalized patients' medical vocabulary knowledge and those patients' perceptions of the effectiveness of their communication with nurses (Welkowitz, Ewen, and Cohen 1971, p. 239). Because the sample derived for this study was less than twenty, the Fisher exact probability test was also used as an additional method of data analysis. According to Siegel (1956, p. 96) the Fisher exact probability test "is an extremely useful nonparametric technique for analyzing discrete data. . . when the two independent samples are small in size."

As previously stated in this chapter the mean of the participants' medical vocabulary scores was 32, and the median was 37. The standard deviation of the vocabulary scores was computed to be 10.6. The original plan of data analysis for a sample of N equals 30 was to have divided the scores into three groups--low, medium, and high. A medium score would have been one that fell within -1 and +1 standard deviation of the mean. A score greater than

+1 standard deviation would be a high score, and a score more than -1 standard deviation away from the mean would have been a low score. However, because the actual sample size obtained was N equals 15, the scores were only divided into two groups--high and low. A high score was one that was within -½ and +½ standard deviation of the mean of 26.7 (standard deviation = 10.6, ½ standard deviation = 5.3). A low score was any one that was greater than -½ standard deviation away from the mean. Table 5 presents the results of this categorization of scores.

Table 5

Categorization of High and Low Vocabulary Questionnaire Scores

	High	Low
N	10	5
R	30 - 46	4 - 26

R = the range of scores

Table 5 shows that ten participants obtained high scores on the medical vocabulary questionnaire, and five received low scores.

An analysis of Tool 2, the Perception of Communication Effectiveness scores, follows. Again, it was originally anticipated that scores would range from negative to positive. No scores fell in the low, negative range because of the overall trend to rate communication as effective. For purposes of analysis the scores were divided into two categories--highly effective communication and less highly effective communication. High scores were those rated 11 or above, and low scores were those which were 10 and below. In computing the communication effectiveness score responses of "2," "I cannot be sure this is true of my hospital experience," were counted as neutral. In other words, a score equaled the total number of positive responses, minus any negative responses.

Table 6 shows the division of scores into the highly effective and less highly effective range.

Table 6

Division of Communication Effectiveness Scores--
Highly Effective and Less Highly Effective

	Highly Effective Communication	Less Highly Effective Communication
N	10	5
R	14 - 19	9 - 10

R = range of scores

Table 6 shows that ten participants were given a perception of communication effectiveness score of highly effective, and five received scores of less highly effective.

The data from the two tools were then placed in a 2 x 2 contingency table for analysis by chi square.

> Chi square can be used to test the significance of the relationship between two variables when data are expressed in frequencies of joint occurrence (Ewen 1971, p. 234).

Table 7 presents the results of the chi square analysis. Chi square was equal to .482. To have been significant, chi square would have had to have been equal to or greater than 3.84. The most reasonable conclusion is that the variables of medical vocabulary knowledge and perceptions of communication effectiveness by hospitalized patients are independent. The null hypothesis was accepted. With this sample there was no statistically significant relationship between the two variables. The Fisher exact probability test likewise indicated that there was no significant relationship between the variables. Computation of the Fisher test was accomplished by referring to Siegel's book, Nonparametric Statistics (1956, p. 99). Because no statistically significant relationship was found between variables, there was no need to obtain a measure of the strength of the relationship. The phi coefficient would

Table 7

Relationship Between Medical Vocabulary Scores and Perceptions of Communication Effectiveness Scores

	Medical Vocabulary Scores		
	Low	High	Total
Highly Effective	3 fe 3.33	7 fe 6.66	10
Less Highly Effective	2 fe 1.66	3 fe 3.33	5
Column Total	5	10	N=15

x^2 = .482 df = 1 P >.05 fe = expected frequency

have been utilized to obtain an index of the strength of the relationship if the chi square value had been significant at the .05 level.

Five demographic variables were thought to have some possible association with variations in achieved medical vocabulary scores. These were: age, sex, educational preparation, race/ethnic group, and whether or not the participant had been previously hospitalized. A discussion of the results obtained follows.

The age range of participants was nineteen to fifty years. The mean age of the sample was 31.4 years. The sample was divided into two age groups--those younger than the mean age, and those older than the mean age of 31.4. Six participants were older than the mean. Table 8 shows the distribution of the respondents by age and medical vocabulary scores. When analyzed by chi square, no statistically significant difference was found between a participant's age and his score on the vocabulary questionnaire. These findings were in contrast to those of the Samora et al. study (1961, p. 88) where a negative relationship was found between a patient's age and his vocabulary score. The older the respondent was in that study, the lower was his vocabulary score. This may have occurred because the age range achieved in this study was thirty years, while in the Samora study, it was 50+ years.

Table 8

Comparison of Participants' Ages with Vocabulary Scores

	Age	
	Older	Younger
Low	1	4
High	5	5

$x^2 = 1.25$ df = 1 p >.05 N=15

The results of the chi square analysis of the variables sex and medical vocabulary score achieved are presented in Table 9. The number of participants falling into each of the two categories is shown once again in a 2 x 2 contingency table. Chi square was computed to be .133. There was no statistically significant relationship between a participant's sex and his vocabulary score. This finding was congruent with the Samora et al. study.

Table 9

Comparison of Participants' Sex with Vocabulary Scores

	Sex	
	Male	Female
Low	3	2
High	5	5

$x^2 = .133$ df = 1 p > .05 N= 15

Categorized in Table 10 are the participants' scores by educational preparation. No statistically significant relationship was demonstrated between these two variables. The results cannot be compared to the Samora et al. study because all respondents with twelve or more years of education were placed in one category. Participants with a high school education in this study did not do significantly worse than their college educated counterparts.

Table 10

Comparison of Participants' Educational Backgrounds With Vocabulary Scores

Vocabulary Scores	Educational Background	
	High School	College
Low	5	0
High	7	3

$x^2 = 2.045$ df=1 $p > .05$ N=15

Table 11 shows that there was a statistically significant relationship between a participant's racial background and the score obtained on Tool 1, Medical Vocabulary Knowledge. The Black respondents of this sample gave more inadequate responses than did the Caucasian participants. In the Samora et al. study, the performance of Caucasians and Blacks were essentially

equal. The Fisher exact probability test also revealed a significant relationship between the variables of race and vocabulary score. All nurses working in the study setting were Caucasians.

Table 11

Comparison of Race of Participants and Medical Vocabulary Scores

Vocabulary Scores	Race	
	Black	Caucasian
Low	5	0
High	1	9
$x^2 = 11.25$	$p = .001$	df=1 N=15

The final demographic variable analyzed was participants' previous hospitalization experience. Participants were in three categories: 1) no previous hospitalizations, 2) previously hospitalized--same agency (yes, yes), and 3) previously hospitalized--different agency (yes, no). The results of the chi square analyses are presented in Tables 12 and 13. Table 11 shows there is no statistically significant relationship between whether or not a participant had been previously hospitalized and his medical vocabulary score.

Table 12

Comparison of History of Previous Hospitalization With Vocabulary Scores

Vocabulary Scores	Previous Hospitalization No	Previous Hospitalization Yes
Low	2	3
High	2	8

$x^2 = .68$ df = 1 $p > .05$ N=15

Table 13 likewise illustrates that there was no significant relationship between the variables of hospitalization in same or different agency, and the participants' vocabulary score achievement. These variables were not examined in the Samora et al. study.

Table 13

Comparison of Location of Previous Hospitalizations With Vocabulary Scores

Vocabulary Scores	Same Location Yes-Yes	Same Location No-No
Low	0	3
High	4	4

$x^2 = 2.32$ df = 1 critical x^2 value = 2.71

$p > .05$ N=11

Summary

In conclusion, the medical vocabulary knowledge of a sample of hospitalized patients was assessed, and those patients' perceptions of the effectiveness of communication between themselves and nurses were determined. Two tools were utilized to collect the data. The data collected were categorized, then analyzed, utilizing the chi square and the Fisher exact probability test.

The results from the examination of the data indicated that there was no relationship between the variables of patients' medical vocabulary knowledge and their perceptions of the effectiveness of their communication with nurses. The null hypothesis was accepted at the .05 level of significance. A relationship was established between a participant's racial background and vocabulary score achievement. Other variables not measured in this study (i.e., nonverbal transmission of meanings) may have influenced the results and warrant further investigation. The chi square and Fisher exact probability test yielded equivalent results for all variables investigated.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

This investigation was a descriptive study of the following problem: What relationship, if any, can be identified between the medical vocabulary knowledge of hospitalized patients and their perceptions of the effectiveness of communication between themselves and nurses. The purposes of this study were: 1) to assess the medical vocabulary knowledge of a sample of hospitalized patients, 2) to determine those patients' assessments of the effectiveness of their communication with nurses, and 3) to examine what relationship, if any, could be identified between the medical vocabulary knowledge of hospitalized patients and their perceptions of the effectiveness of communication between themselves and nurses.

The study was conducted on three medical and surgical wards in a 378-bed general military hospital located in a central Texas city with a population of 40,000. Fifteen inpatients, five from each of the three wards, were the sample obtained. Each participant was a volunteer.

Two tools were utilized for the collection of data. Tool 1 assessed the medical vocabulary knowledge of the participants. The vocabulary words of the tool were those utilized by Samora et al. (1961, p. 86) in a study documented in the literature. The words were used in the context of simple sentences devised by the investigator. Content validity was established by administering the vocabulary list to all nurses and physicians working in the study setting. Their responses and the criteria established in the literature were comparable.

The second tool utilized assessed patients' perceptions of the effectiveness of their communication with nurses. It was developed by Peitchinis (1977, p. 112). Content validity of Tool 2 was established for this study by an expert panel with knowledge of communication in the nurse-patient relationship.

Data were collected in two phases on separate days. Phase 1 of data collection began within seventy-two hours of a participant's hospital admission. Data collection was completed on all participants by their sixth hospital day. Both tools were administered via taped recording. All data collection forms were coded to insure participants' anonymity.

The medical vocabulary knowledge of a sample of hospitalized patients was assessed and those patients'

perceptions of the effectiveness of communication between themselves and nurses were determined. These data were categorized and then analyzed utilizing the chi-square and the Fisher exact probability test. The results from the examination of the data indicate that there was no relationship between patients' medical vocabulary knowledge and their perceptions of the effectiveness of their communication with nurses. A statistically significant relationship, $p = .001$, was established between a participant's racial background and vocabulary score achievement. Caucasians obtained higher vocabulary scores than Black participants. Variables other than those measured in this study may have influenced the results.

Conclusions

The following conclusions were drawn from this study:

1. There was no statistically significant relationship established between patients' medical vocabulary knowledge and their perceptions of the effectiveness of communication between themselves and nurses. That no relationship was established between the variables may have been influenced by the small sample size and/or other variables not measured in this study.

2. Communication through other transmission signals, i.e., nonverbal, may have influenced the participants' positive assessments of the effectiveness of their communication with nurses.

3. There was a significant relationship between the demographic variable of a participant's racial background and his vocabulary score achievement. Caucasians achieved higher vocabulary scores than Black participants in this study. All nurses working in the study setting were Caucasians. This is a possible explanation for the higher vocabulary score achievement of Caucasian participants. Further study is needed regarding communication between nurses and patients of Black cultural backgrounds.

4. There was no significant relationship between the demographic variables of participants' ages, sex, educational backgrounds, or history of previous hospitalizations and medical vocabulary scores.

5. The conclusions derived cannot be generalized to populations other than the inpatient sample in this study. The sample was not representative of the setting's inpatient population.

Implications

As a result of this study the following implications for nursing are proposed:

1. Patients identify their communication with nurses as effective. Nurses and patients alike need to be cognizant of which factors, behaviors, etc. lead to formation of positive and negative perceptions of communication.

2. Vocabulary usage by nurses and physicians was at least moderately congruent in this study. Nurses and physicians need information about each other's vocabulary usage and other communication behaviors in order to promote consistency in care rendered.

3. Many of the consumers' complaints about ineffective staff-patient communication in the literature are directed toward physicians. If nurses' communication behaviors with patients are actually effective components of these behaviors need identification.

4. While the importance of communication in the nurse-patient relationship is receiving increased emphasis in general, no standardized communication skills and theories are being taught in basic and continuing nursing education programs. At present, proficiency in communication skills is desirable, but not required, of nurses.

5. Nurses can effectively assist the patient-consumer to be a participant in determining his own care only when they are secure in their ability to learn and perfect communication skills, such as interviewing. Identification of essential communication skills is needed so

that nursing can progress to learning and standardizing these components of care.

Recommendations

Recommendations resulting from this study include the following:

1. That the study be replicated using a larger sample obtained from other populations with participants of different racial/cultural backgrounds

2. That a similar study be implemented with a questionnaire about communication effectiveness containing only verbal communication items

3. That a study be implemented in which patients are not only asked for definitions of medical vocabulary words, but also are asked to judge how well they feel they know the words, i.e., I understand the meaning of this word, I am not sure if I understand the meaning of this word, etc.

4. That studies be implemented using different terms, to include highly technical words, to further determine patients' levels of comprehension. That reports of these studies be published, and that nurses inform themselves of terms and concepts which cause comprehension difficulties

5. That studies be implemented in which communication effectiveness is assessed by other means

6. That nurses conceptualize and utilize models and theories of communication which can assist other members of the nursing profession in identifying how effective communication works and how it can be impaired

7. That nurses be able to formulate and exchange meanings in such a way that the receiver-decoder is induced to form an identical meaning for the message conveyed

8. That nurses begin and continue to identify and to accept their individual and collective communication responsibilities. That the communication responsibility identified in this study, of nurses exercising selectivity in choosing vocabulary words for use in verbal nurse-patient exchanges, be implemented

9. That nurses recognize that they will be increasingly confronted with the responsibility and the opportunity to operationalize the role of facilitator of communication

10. That research studies be directed toward improving patients' communication skills

11. That nurses' awareness of the existence of communication barriers leads to subsequent investigation and evaluation of the importance of those factors in preventing effective nurse-patient communication

12. That nursing educators at all levels continue to emphasize the importance of communication so that nurses are encouraged and required to acquire and perfect the art and science of communicating effectively

APPENDIX A

DEFINITIONS OF SERIOUSLY ILL AND VERY SERIOUSLY ILL

APPENDIX A - DEFINITIONS OF SERIOUSLY ILL AND VERY SERIOUSLY ILL

Seriously Ill - A patient is seriously ill when his illness is of such severity that there is cause for immediate concern, but there is no imminent danger to life

Very Seriously Ill - A patient is very seriously ill when his illness is of such severity that life is imminently endangered.

Handbook of Patient Administration, U.S. Army Medical Field Service School, p. 71.

APPENDIX B

ASSESSMENT TOOL OF PATIENTS' MEDICAL VOCABULARY KNOWLEDGE

APPENDIX B - ASSESSMENT TOOL OF PATIENTS' MEDICAL VOCABULARY KNOWLEDGE

Vomit	Deformity	Appendectomy
Relieve	Fatal	Therapy
Appointment	Autopsy	Nerve
Constipated	Routine	Malignant
Rash	Acute	Terminal
Injection	Cavity	Tendon
Skull	Specimen	
Amputate	Sedative	
Persistent	Deficient	
Splint	Germs	
Abdomen	Intern	
Negative	Bacteria	
Sterile	Cerebral	
Allergic	Nutrition	
Symptoms	Digestion	
Reaction	Vitamins	
Swab	Cardiac	
Abortion	Orally	
Mole	Tissue	
Pulse	Dilate	
Isolate	Respiratory	
Nasal	Secretions	

Samora, J., Saunders, L. and R. Larson. 1961. Medical Vocabulary Knowledge Among Hospitalized Patients. Journal of Health and Human Behavior. Vol. 2, p. 86.

APPENDIX C

SENTENCES UTILIZING THE FIFTY MEDICAL VOCABULARY WORDS OF TOOL 1

APPENDIX C - SENTENCES UTILIZING THE FIFTY MEDICAL VOCABULARY WORDS OF TOOL 1

1.	Abdomen	Let me examine your abdomen.
2.	Abortion	Have you ever had an abortion?
3.	Acute	This is an acute illness.
4.	Allergic	Are you allergic to anything?
5.	Amputate	How did you feel when the doctor told you he had to amputate?
6.	Appendectomy	Have you had an appendectomy?
7.	Appointment	Your next appointment will be in six weeks.
8.	Autopsy	Will you give your permission for an autopsy?
9.	Bacteria	The test results show you have bacteria in your urine.
10.	Cardiac	Do you have a history of cardiac problems?
11.	Cavity	You have more than one cavity.
12.	Cerebral	There was cerebral damage.
13.	Constipated	Are you constipated?
14.	Deficient	Your child's diet is deficient in iron.
15.	Deformity	The operation will leave you with a permanent deformity.
16.	Digestion	How is your digestion?*
17.	Dilate	This will dilate your pupils.
18.	Fatal	The accident was fatal to all involved.
19.	Germs	This sickness is caused by germs.*
20.	Injection	I am going to give you an injection.
21.	Intern	The intern will take care of you.*
22.	Isolate	We are going to isolate you for several reasons.
23.	Malignant	This disease is malignant.
24.	Mole	Has this mole changed color?
25.	Nasal	Have you ever had any nasal problems?
26.	Negative	All your test results are negative.
27.	Nerve	There has been damage to the nerve.
28.	Nutrition	What do you know about nutrition?
29.	Orally	Take this orally.
30.	Persistent	Has this been a persistent problem?
31.	Pulse	Let me feel your pulse.*
32.	Rash	Do you have a rash?
33.	Reaction	Can you describe the reaction?
34.	Relieve	What do you do to relieve it?
35.	Respiratory	Have you had any respiratory diseases?*
36.	Routine	This is a routine procedure for all patients.
37.	Secretions	What do your secretions look like?
38.	Sedative	This is a sedative.

APPENDIX C - (continued)

39. Skull	We are going to take some skull films.
40. Specimen	This is a specimen bottle.
41. Splint	Is the splint uncomfortable?
42. Sterile	Keep this sterile.
43. Swab	I am going to swab it.
44. Symptoms	What are your symptoms?
45. Tendon	The tendon is injured.
46. Terminal	Your condition is terminal.
47. Therapy	Was the therapy effective?
48. Tissue	There is some tissue damage.
49. Vitamins	How much do you know about vitamins?
50. Vomit	When did you vomit?

*Indicates sentences used in Samora et al. study also.

APPENDIX D

PATIENTS' PERCEPTION QUESTIONNAIRE OF COMMUNICATION EFFECTIVENESS

APPENDIX D - PATIENTS' PERCEPTION QUESTIONNAIRE OF COMMUNICATION EFFECTIVENESS

1. I feel that the nurses, doctors, and other staff are working with me as a team in my recovery.

2. I am treated with kindness, courtesy, and respect by all nursing staff.

3. I believe that the nurses are honest with me.

4. The nurses are willing to explain things to me that I want to know.

5. The nursing staff explain to me what they are going to do in any treatments that they perform for me.

6. I know how treatments may affect me.

7. I understand the reasons for any restrictions on my diet.

8. I believe that the nursing staff understand how I feel.

9. I understand the reasons for any restrictions on my activity when I leave the hospital.

10. Hospital policies to which I am subject are explained to me.

11. My dignity and modesty are respected.

12. I feel that the nurse is working with me, not just doing things to or for me.

13. I am given explanations about my condition and treatments which I can understand.

14. I have the necessary information to make plans to take care of myself when I go home.

15. I know that the nurse will inform other nursing staff about my personal needs and preferences, so that I do not have to tell everyone that comes along.

16. My family is informed and consulted about my care if we so desire.

APPENDIX D - continued

17. I feel that the nursing staff will spare no effort in helping me to recover.

18. I have opportunities to talk privately with the nurses about my condition if I feel like it.

19. I am taught how to do things for myself if my condition necessitates changes in my former practices or habits.

20. I feel that the nurses have time to talk to me.

Peitchinis, Jacquelyn. 1976. Staff Patient Communication in the Health Services. Springer Publishing Co. New York, p. 112.

APPENDIX E

PERMISSION FOR THE STUDY

TEXAS WOMAN'S UNIVERSITY

Human Research Committee

Name of Investigator: Lanell Vergara Center: Dallas

Address: 1403 Herndon Drive

Killeen,

Texas 76541

Dear Ms. Vergara:

Your study entitled Hospitalized Patients Knowledge of Medical Vocabulary and Their Perceptions of Communication Effectiveness Between Themselves and Nurses has been reviewed by a committee of the Human Research Review Committee and it appears to meet our requirements in regard to protection of the individual's rights.

Please be reminded that both the University and the Department of Health, Education and Welfare regulations require that written consents must be obtained from all human subjects in your studies. These forms must be kept on file by you.

Furthermore, should your project change, another review by the Committee is required, according to DHEW regulations.

Sincerely,

Chairman, Human Research Review Committee
at Dallas

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING
DENTON, TEXAS

DALLAS CENTER
1810 Inwood Road
Dallas, Texas 75235

HOUSTON CENTER
1130 M.D. Anderson Blvd.
Houston, Texas 77025

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE (NAME OF INSTITUTION ON FILE)

GRANTS TO LANELL C. VERGARA

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:

Hospitalized Patients' Knowledge of Medical Vocabulary and Their Perceptions of Communication Effectiveness Between Themselves and Nurses

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 10/7/77

(SIGNATURE ON FILE)
Signature of Agency Personnel

Lanell C Vergara
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 -- T.W.U. College of Nursing.

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