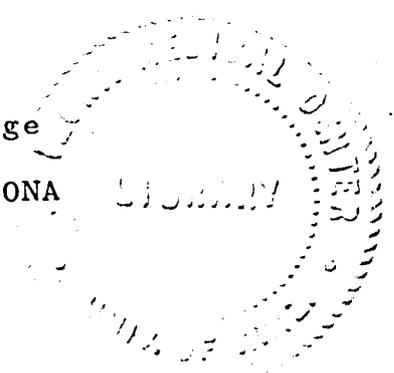


HEALTH VOCABULARY KNOWLEDGE AMONG A SELECTED
MEXICAN-AMERICAN POPULATION

by

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ABSTRACT

The purpose of this study was to investigate the health vocabulary knowledge of fifty Mexican-American patients from Tucson, Arizona. A list of twenty-four commonly used words was presented verbally to these patients and their definitions of the words were obtained. The study was also compared with an earlier one done in Florida with Negro patients in which the same list of words was used.

The thesis is based upon communication theory and its relation to social class and cultural differences between the typical patient seen in community health and the health practitioner. It was argued that communication is often blocked because of these factors which result in vocabulary differences.

This thesis did reveal that a high percentage of the words, which seem simple to the nurse, were in fact beyond the capacity of the patient.

The importance of the study was in the identification of contributing factors for failures in some health programs and patients' frequent rejection of recommended health practices. The study demonstrated the need for community health nurses to consider carefully the choice of terminology used in instructing patients. The author

concluded that health practitioners continually obtain feedback from the patient to determine whether the patient really understands what has been said and if an equivalence of meaning has been reached.

CHAPTER I

INTRODUCTION

The nurse-patient relationship in community health is one that calls for clear, precise, and complete transmission and reception of information. The patient must understand what is told to him and what is asked of him if he is to cooperate fully and receive the care he needs.

As Skipper puts it:

In any culture, illness brings with it a degree of fear and anxiety to the stricken individual. As a natural consequence of the concerns that accompany illness itself, the sick person desires information about his illness. Without this information, it is most difficult for him to take an active part in working toward his own health.¹

He also states that in his study, "Communication and the Hospitalized Patient," the most criticized aspect of medical care was giving poor explanations.²

Everyone in community health nursing would also agree that communication is important; and yet, it remains an ever-present difficulty. At times it seems that one of the hardest things is to convey medical terminology

1. James Skipper, Jr., "Communication and the Hospitalized Patient," Social Interaction and Patient Care. eds., James Skipper and Robert Leonard (Philadelphia and Montreal: J. B. Lippincott Co., 1965), p. 62.

2. Ibid.

accurately from one mind to another. Through words, the community health nurse tries to reach the mind of her patient, and even though words flow freely, it is curious how seldom and how fleetingly the two minds meet. And yet, the very effectiveness of community health depends on this interchange of meanings among people.

Statement of the Problem

How clearly do the patients seen by community health nurses understand the words commonly used by those nurses?

Justification of the Problem

The investigator had observed, as far back as her first experience in community health nursing as an undergraduate student, that patients' rejection of recommended health practices was a frequent problem. There were times when it was felt that efforts spent in instructing and advising patients had been completely wasted. Other students and nurses seemed to confirm this frustration and still do. The nurse often feels inadequate and frustrated because her explanations of certain aspects of care may be misunderstood or ignored. When for example, the child arrives at school after his mother had been told he had a communicable disease; or the expectant mother becomes malnourished after she was carefully told the advantages of a well balanced diet, the nurse wonders how she failed.

In community health, it is so often the case that patients not only ignore the advice given to them but they often give up and avoid altogether the services offered to them by the staff in clinics and agencies because of factors like communication barriers.

One does not have to look very far to obtain further rationale for studying the problem. In 1968, the National Tuberculosis and Respiratory Disease Bulletin reported that the National Public Relations Council of Health and Welfare Services sent out questionnaires to health and welfare organizations. The following response points out a kind of hopelessness that seems to exist in many agencies.

Question: "What problems does your organization face in relating to and communicating with inner city residents?"

Answer: "They don't understand us, and we don't understand them."

Question: "What are the underlying causes of the problem?"

Answer: "They speak one language, and we speak another, although the words of both are part of the English language."³

Because of situations such as those mentioned above, the investigator decided to test out how well the typical patient seen in community health really understands the

3. Harold N. Weiner, "The Usual Health Programs Don't Work," National Tuberculosis and Respiratory Disease Bulletin, 55:3, February, 1969.

medical terminology used by nursing personnel in the field. In 1963, a pilot study done by the investigator at the University of Florida School of Nursing revealed that very few commonly used words are actually understood by the typical Negro patients seen by community health nurses in that area. The pilot study, discussed in the following chapter, stimulated the investigator to see the need to examine the problem further so that nursing theory may be developed to help explain part of the reason that health programs often fail. Findings from this study should help to pinpoint why health personnel many times are unable to get through to the patients. Findings should also be of value to nurses who want to know how technical they can or cannot be in their verbal transactions with patients. The findings should be useful to student nurses who need significant guidelines for planning their communication process and for teachers who look to research in order to back up their explanations to students for reasons why intervention sometimes fails. The findings should help, in general, to bridge the gap somewhat between the patient who is usually disadvantaged culturally, educationally, socially, and emotionally, and the practitioner who is usually more advantaged in these areas.

Scope and Limitations

An earlier pilot study done with Negroes in Florida was replicated in this study with fifty Mexican-Americans from low income groups in Tucson, Arizona, in order to compare results between the two different ethnic groups. The findings can only apply to these groups at the present time. Further research would be valuable on a representative group from the white population for additional comparison.

Theoretical Framework

According to Lundberg:

Communication is the process through which a set of meanings embodied in a message is conveyed to a person or persons in such a way that the meanings received are EQUIVALENT to those which the initiators of the message intended. Communication means "commonness" between two points. Communication has been achieved when there has been a transfer of meaning.⁴

Skipper and Leonard list five elements of communication: a sender, a receiver, a message, a channel of transmission, and a response or effect. They point out that the fact that a message is sent in no way guarantees that it will be received at all. The receiver may not even hear it. A much more frequent occurrence, however, is the situation

4. George Lundberg, Clarence Schrag, and Otto Larsen, "Elements of Communication," A Sociological Framework for Patient Care, eds., Jeanette Folta and Edith Deck (New York, London, and Sydney: John Wiley and Sons, Inc., 1966), p. 23.

where a message is sent and received but not understood or else misinterpreted.⁵

What is involved in understanding why messages are misinterpreted? It seems logical to begin by looking for barriers to human communication; and John Parry in The Psychology of Human Communication mentions seven:

1. Limitation of the receiver's capacity
2. Distraction (noise)
3. The unstated assumption
4. Incompatibility of schemas
5. Intrusion of unconscious or partly conscious mechanisms
6. Confused presentation
7. Absence of communication channels⁶

For the purposes of this study, the investigator considered the implications of only one barrier, that reflected in the limitation of the receiver's capacity. In this case, because the demands do not fall within the receiver's capacity, there is a loss of information which could be compared to a mechanical deficit, such as the leakage of water from a pipe. Mistakes will start to appear as the limit of the receiver's capacity is approached. When capacity is exceeded, total breakdown may occur. The human listener then tries to compensate for the loss by

5. James Skipper and Robert Leonard, eds., "The Importance of Communication," Social Interaction and Patient Care (Philadelphia and Montreal: J.B. Lippincott Co., 1965), p. 52.

6. John Parry, The Psychology of Human Communication (London: The University of London Press, Ltd., 1967), p. 84.

extrapolating from the cues he picks up. The extent to which such compensation can be made is dependent on the listener's store of background information.⁷

Making the assumption that it is true that the communicative process is initiated when the teller utters sounds which symbolize his experiences, one can also assume then that communication is possible to the extent that the hearer has had similar experiences to that of the sender and also has been conditioned to associate the given sounds with those experiences.⁸ Since the next assumption that follows is that communication barriers occur when the above is not true, then it also follows that in community health nursing, it is necessary to examine which is the prevailing situation. In other words, in community health nursing, is there a situation in which the sender and receiver of information come from similar backgrounds with similar experiences and with similar capacities? The answer is no.

In community health, the situation is one in which there is a higher status practitioner and a lower status patient. Furthermore, the patient and practitioner are often from different ethnic groups. As Ozzie Simmons puts it, "The public health movement has been conceived and implemented primarily by middle class people and directed

7. Ibid. p. 86.

8. Lundberg, Schrag, and Larsen, op. cit., p. 25.

primarily at lower class people."⁹ Irelan says that awareness of social distance is probably one of the causes of distrust of medical personnel. These low income and minority groups see themselves poorly evaluated by clinic personnel. The point that she makes is that these people are bound to be less cooperative and less likely to benefit health-wise.¹⁰ Studies by Suchman¹¹ have also shown that these groups have a much lower level of knowledge about disease and unfavorable attitudes about medical care. Anyone who reads government pamphlets like the one entitled "Low Income Life Styles" and books like The Health of Regionville, can see that the poor have a much higher prevalence of disease, yet they are the ones most ignorant about it. Ironically then, the people that are most in need of medical services are the ones who least often get them. All of these things point to the relevance of the broad crucial problem that not enough is being done to bridge the gap between middle class public health and

9. Ozzie G. Simmons, "Implications of Social Class for Public Health," A Sociological Framework for Patient Care, eds., Jeanette Folta and Edith Deck (New York, London, and Sydney: John Wiley and Sons, Inc., 1966), p. 35.

10. Lola Irelan, "Health Practices of the Poor," Low Income Life Styles (U. S. Department of Health, Education, and Welfare, Publication No. 14), p. 59.

11. E. A. Suchman, "Social Factors in Medical Deprivation," American Journal of Public Health, 55:1730, 1965.

medical care programs and the lower class culture from which many of the patients come.

As opposed to years gone by, there is now a large bulk of available medical knowledge. However, as Irelan puts it, "We are discovering the potency of social barriers for implementing this knowledge."¹² One of these barriers is indeed poor communication.

Experience on the part of the investigator indicated that health workers must be attuned to the fact that communication across any group boundaries always runs into a danger of being blocked. Studies also show observable differences in communication according to social class.¹³

The communication problem becomes complicated to a much greater extent when a health worker and patient are not only trying to cross social class lines, but cultural lines as well. Here in the Southwest, many of the patients who are seen in the health field are Mexican-Americans and Indians. In this case, cross cultural language differences cause further barriers in communication, compounding the problem. Both the practitioner and the patient are limited in capacity for understanding due to the fact that they may not know each other's language well. Both parties are

12. Irelan, op. cit., p. 51.

13. Leonard Schatzman and Anselm Strauss, "Social Class and Modes of Communication," American Journal of Sociology, 60:329-35, January, 1955.

likely to become equally frustrated since many words may be completely lost. Furthermore, the remaining words are likely to represent something completely different in each culture. Edward Hall, in Human Organization, comments on intercultural communication:

Culture affects communication in various ways. Among these is included the relationship of what is said to what is meant--as when "no" means "maybe" and "tomorrow" means "never." In some cultures other than our own, words and their meanings do not have such direct connections. People may be more concerned with the emotional context of the situation than with the meanings of the particular words.¹⁴

Margaret Aasterud discusses the frustration nurses often feel in attempting to communicate with cultural groups other than their own. She says that frequently, cooperation on the part of the patient is interpreted as understanding when the assent is only an attempt to please the physician or nurse, particularly in cases with underprivileged and racially segregated groups.¹⁵ The writer, as an undergraduate at the University of Florida School of Nursing, noted that this was a frequent problem that had to be faced. The response often received after instructing a Negro

14. Edward T. Hall and William Whyte, "Intercultural Communication: A Guid to Men of Action," Human Organization, 19:14, August, 1960.

15. Margaret Aasterud, "Explanation to the Patient," Social Interaction and Patient Care, eds., James Skipper and Robert Leonard (Philadelphia and Montreal: J. B. Lippincott Co., 1965), p. 85.

patient was just "Yes Mam." It was often assumed that when this response was given, the patient understood the instructions. Later, when analyzing the effectiveness of the nursing approach, it became obvious that he had not. It also became obvious to the investigator once again that something needed to be done to get an idea of the level of the patient's understanding.

Nurses everywhere in their daily work depend on the use of words. The results they achieve may depend on how skillfully these words are used. Many words over the years have become so ordinary to them that they no longer regard them as "professional jargon." Far more difficult to avoid are words from the general vocabulary which still may be unknown or difficult to some people. To further complicate matters, few patients will ever say to medical personnel that they do not understand the words being used. It is too easy for the nurse to assume that a word means the same thing to her as it means to everyone. But do community health nurses really speak the same language as their patients? Is it true that many patients seen in the field have a vernacular all their own? Do those who give health services have a jargon all their own? Is it possible that one of the reasons the patients seen in the clinic and in the home so often fail to follow health counseling is that health personnel are not taking into consideration differences in vocabulary?

The purpose of this study was to investigate the medical vocabulary knowledge of the typical patient seen in community health nursing in Tucson, Arizona. A vocabulary list derived from terms commonly used by community health nurses was used. The list was tested in a study done by the investigator at the University of Florida College of Nursing in 1963, when the investigator measured the level of understanding of a selected Negro population. The list was reviewed by two doctors who helped to clarify it and establish consistency. The subjects were asked to tell what these words mean.

The identical words were used in the present study with a selected population of fifty Mexican-Americans; the researcher speculated that a significant number of the commonly used words that would be presented from the list would be beyond the limitation of the receiver's capacity. It was believed that professional people who give health services habitually use a vocabulary of words understood by their colleagues, but not understood by the Mexican-Americans typically seen as community health patients, with whom they are presumably communicating. It was believed that this habit of expecting patients to know definitions of commonly used words obstructs communication

since communication has been achieved only when there has been a transfer of meaning.¹⁶

16. George Lundberg et al., op. cit., p. 23.

CHAPTER II

REVIEW OF THE LITERATURE

There is a meager amount of information in the literature which deals with the nursing care problems of patients with different cultural and socioeconomic orientations, and even less on the extent to which these groups fail to understand each other's communications.

Mary Louise Paynich from the University of Michigan Hospital School of Nursing did a study on cultural barriers to nursing communication, a part of which was a vocabulary test including 14 technical concepts frequently used by nurses. She found that thirty-eight percent of those questioned did not understand the concept "germ." Fifty-nine percent did not understand "exposed."¹⁷ The rest of the vocabulary list was not shown.

In the medical literature for physicians, one study, reported in 1945, in the Yale Journal of Biology and Medicine, shows the following: twenty-five patients with neuropsychiatric disorders were asked to define sixty medical terms as they are used at the bedside. Hardly any

17. Mary Louise Paynich, "Cultural Barriers to Nurse Communication," American Journal of Nursing, 64:90, February, 1964.

term was generally known. As was expected, highly technical terms and medical jargon were virtually unknown.¹⁸

In 1957, a study was done by Dr. Arthur Seligmann and published in the Journal of Chronic Diseases. The purpose was to test the level of medical information among clinic patients. The level of information about ten common diseases among 214 randomly selected clinic patients was tested. It was found that persons in the study group were poorly and irregularly informed about disease. The most surprising finding of all, according to Dr. Seligmann, was that having one or more diseases did not substantially increase the patient's information about these conditions in comparison with those who remained free of them. He concludes:

The reasons are not clear. It may be that the patient unconsciously rejects explanations of his disease. Other possible reasons are that physicians fail to explain illness adequately because they feel the patient is best kept un-informed, because they feel it unnecessary, or because of real or fancied limitations of time.¹⁹

It is interesting to note that he did not include in the possible explanations the fact that the lack of information

18. Frederick C. Redlich, "The Patient's Language, An Investigation Into the Use of Medical Terms," Yale Journal of Biology and Medicine, 17:427-53, May, 1945.

19. Arthur Seligmann, M.D., "Level of Medical Information Among Clinic Patients," Journal of Chronic Diseases, 6:504, June, 1957.

might be due to the physician's use of medical terms and jargon that are too difficult for the patients, nor did he consider the possibility that the social class distance might also have an effect on the patient's lack of knowledge.

Samora, Cohen, and Ordonez have a related study in the Milbank Memorial Fund Quarterly entitled "Communication Between Physicians and Patients in Out Patient Clinics." This particular study was said to focus on the relationship of social class to the understanding of the patient. The sample represented a lower class group with unstable incomes or none at all. However, this study was done in Columbia and appeared to have been translated. It was rather difficult to follow and to interpret the findings. Other limitations were that only ten words were used and there was a lack of uniformity in the way the words were presented. The level of understanding was judged by a third party listening to the conversation between the doctor and the patient in which one word was the key. Physicians were even allowed to reword basic medical principles that were not immediately grasped by the patient.²⁰ Since there seemed to be so much room for

20. Julian Samora, Lucy Cohen, and Antonio Ordonez Plaja, "Communication Between Physicians and Patients In Out Patient Clinics," Milbank Memorial Fund Quarterly, 56:161-94, April, 1968.

subjectivity, the findings, which state that relatively few problems appeared in the doctor-patient communication at a verbal level, seem quite questionable.

What seems to be one of the best studies done in the area was that of Lyle Saunders, Julian Samora, and Richard Larson. They specifically tested the medical vocabulary knowledge among hospital patients. A list of fifty words was presented to 125 patients. Out of the 6,250 responses, three-fifths of them came under the category called "fairly clear idea of meaning," one-fifth in the category of "no understanding at all," and one-fifth in the category of "erroneous understanding." The authors concluded that there was evidence that the level of comprehension was somewhat less than perfect.²¹ The level of understanding of this study may have been higher than that in other studies mentioned earlier because each word was read to the patient in a sentence, which may have increased the ability to understand. Below are some examples of how far from the intended meanings some of the responses were:

The word abdomen was identified as sides, buttocks, back, uterus, heart, bladder, and the entire area below the waist.

21. Lyle Saunders, Julian Samora, and Richard F. Larson, "Medical Vocabulary Knowledge Among Hospital Patients," Journal of Health and Human Behavior, 2:92, 1961.

The word germs was defined as disease, dirt, something like diphtheria, something like typhoid, cells not functioning, like an infection, something in the body, something bad, something that causes a lot of things like sickness, things you can't hardly see, varmits that grow in the stomach, things that get in food and poison it.²²

The above is about the extent of the related studies that can be found on the patient's knowledge of medical terminology. It would be appropriate, however, to mention the study by Mary F. Bucklin Mohammed in Nursing Research in which she tested patients' understanding of written health information. The results showed that forty-three percent of the patients were unable to profit from any health materials written at the fourth-grade level and above. This test, however, really was examining reading ability. However, the author did raise the question that further research should be done to test the familiarity of words.²³

In the 1963 pilot study done by the investigator, a list of twenty-four selected words was verbally presented to 100 Negroes. The results were similar to the study done by Saunders et al., in that none of the words was completely understood by all the respondents. Only nine of the words were completely understood by the majority of the

22. Ibid., p. 90.

23. Mary F. Bucklin Mohammed, "Patients' Understanding of Written Health Information," Nursing Research, 13:100-108, Spring, 1964.

respondents. Little or no understanding was shown of the remaining fifteen words. This is to say that over half of the words were not understood. (See Table 6.) Below is one of the responses from that study:

Some answers received in response to the word venereal disease were cold, pox, polio, very common, and caught from water.²⁴

A Negro patient then, who is being advised to obtain treatment for venereal disease might, in relation to the understanding demonstrated by these responses, soak his feet for a cold.

Other unexpected findings of that study were the coloring of results due to enunciations. Unusual responses were received to the word anemia. The responses varied from douche to something used for constipation. After reviewing those unusual responses, it was realized that the respondents' interpretation of the enunciation of the word anemia was enema. This again clearly shows how easily the instructions of a nurse can be misinterpreted.

In reviewing the literature then, one finds that the few related studies done in this area show that there is a lack of understanding of medical terminology. In general, however, one finds a paucity of related research.

²⁴. Sondra Scott, "A Study of Responses From Negroes to a Selected List of Words Commonly Used in Health Teaching in a Florida Community" (Student Project, University of Florida College of Nursing), 1963.

It is the writer's belief that her attempt to contribute to the body of knowledge will also be filling a research gap, especially in the area of community health nursing since most of the related research was done with the use of hospital terminology.

CHAPTER III

DESIGN OF THE STUDY

In order to make a clear comparison of the results obtained in an earlier study with Negroes in Florida in 1963, the same study design was utilized.

Population and Selection of Sample

The population used was a group of Mexican-American adults of Tucson, Arizona, who were in a low-income bracket. There was no discrimination made to sex. The sample was randomly chosen from out-patient clinics and places of residence, again to replicate the former study for comparison. The main difference in this sample from the one in the former study was, besides ethnic group difference, in the number of persons in the sample. In the former study, 100 individuals were used as respondents. That was a feasible number because there were two investigators working together. The present study was limited to fifty respondents.

Twenty-five patients were randomly selected from the local county hospital outpatient clinic. All were in the low income bracket since the hospital accepts only those with incomes below \$4,000 per year. Due to the length of the interview, it was only possible to question

five patients per day. It was necessary to test on five different days to get twenty-five subjects. The patients were randomly selected as follows: the first Mexican-American patient to come in to the clinic was considered No. 1, the second to come in was considered No. 2, and so on. The order of their arrival was easily obtained from the list at the desk where the patients sign in. Each time, the first fifteen names on the list were written down in order of arrival. The investigator also placed fifteen slips of paper in a box, each with a number on it from one to fifteen. From this box, five numbers were drawn. The numbers drawn were then starred on the list, making it possible to have a random selection. Every patient was interviewed whose number on the list was starred. For example, if numbers 3, 10, 12, 1, and 6 were drawn from the box, then the patients who came in third, tenth, twelfth, first, and sixth were called. If any one of those had to be eliminated because he did not meet the requirements for the study, then another number was drawn from the box.

In the community, the neighborhood used was called Barrio Manzo, a predominantly Mexican-American neighborhood. Studies have shown that this neighborhood has one of the highest concentrations of Mexican-Americans in the city of Tucson, the percentage being as high as ninety-six and the

income level of these people being below \$4,000 per year.²⁵ Being in this income bracket makes them similar in socio-economic status to the population at County Hospital. The method of randomization was as follows: First, an attempt was made to exclude those blocks that had persons living on them other than Mexican-Americans. This information was obtained from the resource cited above and consultation with community leaders. From the remaining blocks, every fifth house was chosen.

The variables were handled in the following manner: The level of income was virtually controlled in both cases by the areas chosen. In order to control the language factor, any Mexican-American who was not bilingual was excluded. Only those who had at least a sixth grade education in an English-speaking school were used in order to get some uniformity concerning the command of the English language. The investigator was also able, in preliminary conversation with the subject, to determine if there was any gross discrepancy in the subject's claim to be bilingual. If the subject came from Mexico and was not exposed to at least six years of education in the English speaking schools of Arizona, he was eliminated from the sample. Although the investigator did have command of the

25. Information obtained from Mr. Alberto Sanchez of the Manzo Area Council (developed under the Office of Economic Opportunity).

Spanish language, the only time it was utilized was in a preliminary question wherein it was asked, in Spanish, if the subject spoke English. If the subject answered "No," then the investigator explained in Spanish that the research being done required bilingual subjects and thanked the person, eliminating him from the study. If the subject answered, "Yes," the investigator continued the conversation from then on in English. Twenty-five persons in all were excluded because they did not speak English. Ten were excluded because they did not have at least a sixth grade education. Only four refused to take the vocabulary test. One was unwilling, two felt too ill, and for the fourth, it was an inconvenient time.

Method of Data Collection

A twenty-four item vocabulary list derived from commonly used words in the field of community health was verbally presented to the subjects. The vocabulary list had been derived earlier in 1963 and pre-tested at that time, using a group of Negroes in Gainesville, Florida.

No alterations were made in the list shown below:

- | | |
|---------------------|------------------------|
| 1. Vitamins | 10. Sterile |
| 2. Venereal Disease | 11. Mentally Ill |
| 3. Immunization | 12. Uterus |
| 4. Physician | 13. Germs |
| 5. Communicable | 14. Parasites |
| 6. Examination | 15. Protein |
| 7. Pregnancy | 16. Anemia |
| 8. Prenatal | 17. Hygiene |
| 9. Contraceptive | 18. Well Balanced Diet |

- | | |
|----------------|----------------|
| 19. Dental | 22. Sanitary |
| 20. Pubic Area | 23. Exercise |
| 21. Sewage | 24. Vegetables |

Permission to carry out the study was obtained from the Director of Nurses at County Hospital and the Clinical Nurse Supervisor. Permission in the community was obtained from each individual, in his home.

The subject was first told the purpose of the study. If he agreed to participate, he was informed that he had not been singled out as an individual, but had been chosen at random. He was also told that his name would not be used to identify him. An effort was made to create a non-stressful, informal situation in places where the respondents would feel most at ease. At the County Hospital, the investigator was permitted to use one of the social worker's desks which was far enough away from the waiting area so that the subject had privacy. The test was then explained. A structured interview technique, or questionnaire, was used. This method was chosen to insure that all respondents would be replying to the same stimulus and also to reduce the possibility of having unwanted outside factors influence the meaning of the words. The words were pronounced one by one and the respondent was asked to give his understanding of each word after it was pronounced. The interviewer used a questionnaire like the one shown in Appendix A. It was decided not to give the questionnaire

itself to the subject to fill out in writing because reading and writing abilities were not being measured; and patients were not expected to be facile in these skills. No length of time was placed on the interview. No teaching was attempted afterwards unless requested by the subject.

Method of Data Classification

The answer given by the subject was then evaluated by the investigator on the basis of the following categories: "no understanding," "partial understanding," or "complete understanding." By the latter is meant that the interviewee had a correct, usable knowledge of the word, not necessarily a complete scientific definition. If he had a "workable understanding," in other words, this was counted as "complete." If he knew something about the word, had an idea what it meant, or had part of the meaning right, then the response was counted as "partial." If the word had a meaning to him very different from that of the one a community health nurse would have, then that response was checked as "no understanding," and the response was written down in the space provided. If the subject had never heard of the word and had no idea at all of its meaning, then a check was also placed under "no understanding."

After the level of comprehension was determined and categorized, a numerical score was assigned for each level.

A zero was given by the investigator for the response categorized under "no understanding." One point was given for the response categorized under "partial understanding." Two points were given for the response categorized under "complete understanding." The points given for each word were then added to determine the respondent's total score. The possible range of scores was from 0 to 48.

The design of this study was one that investigated a single aspect of the communication process, that of the ability of patients to understand the meanings of certain words commonly used in health teaching. To obtain a measure of the extent to which patients might be failing to understand the meaning of these words, a twenty-four item vocabulary list was verbally presented to fifty Mexican-Americans in Tucson, Arizona. These subjects related to the investigator what the words meant to them; and scores were assigned to the answer by the investigator on the basis of levels of understanding.

CHAPTER IV

PRESENTATION OF FINDINGS

At the beginning of this study it was speculated that a significant number of the words commonly used by community health nurses are not understood by the Mexican-Americans of the Southwest. It was theorized that because of the differences in culture, education, and socio-economic status between the patient and nurse, many of the words would not be commonly understood by both groups alike. It was believed that the list of twenty-four words used as a vocabulary test in this study would be too difficult for many people in the sample, even though the words seem very simple to nurses. The results of the study bear out that premise.

No respondent gave adequate or workable responses to all fifty words, and only two words were adequately defined by all respondents. The range of individual responses that were considered "complete" or "workable" was from four to twenty words with a mean of 11.6 and a mode of 10 words. Based on the average then, one can say that less than half of the words were understood adequately by the respondents. Little or no understanding was shown of the

remaining twelve or thirteen words. Table 1 shows the responses in terms of percentage.

The only words completely understood by all the respondents were pregnancy and vegetables. The only other words that received fifty percent or higher correct responses were examination, sanitary, physician, dental, sterile, exercises, and germs. A high percentage (over sixty-five) failed to score any point for the following words: pubic area, sewage, parasites, contraceptive, and prenatal.

Listed below are some selected terms with illustrative responses that show how far from the dictionary definitions some of the responses were. The number in the parentheses indicates the number of persons that gave that particular response.

Uterus was defined as being next to the womb (2), the same as the ovaries, the vagina, where the baby actually comes out, some part of the body, under the womb, something inside me, where the eggs are, an opening, and where you urinate (3).

Contraceptive was defined as a prescription, a medicine, coughing, having something to do with intercourse, the time just before you have a baby, a laxative, and when you get pregnant (2).

Table 1. Percentage of Correct, Partially Correct, and Incorrect Responses of Fifty Mexican-Americans to Twenty-Four Medical Terms

Word	Complete Under- standing	Partial Under- standing	No Response or Erroneous Understanding
1. Vitamins	44%	40%	16%
2. Venereal Disease	30%	18%	52%
3. Immunization	40%	14%	46%
4. Physician	84%	2%	14%
5. Communicable	46%	6%	48%
6. Examination	98%	2%	-
7. Pregnancy	100%	-	-
8. Prenatal	24%	10%	66%
9. Contraceptive	24%	4%	72%
10. Sterile	72%	12%	16%
11. Mentally Ill	46%	14%	40%
12. Uterus	28%	24%	48%
13. Germs	22%	52%	26%
14. Parasites	14%	6%	80%
15. Protein	24%	26%	50%
16. Anemia	48%	24%	28%
17. Hygiene	32%	8%	60%
18. Well Bal. Diet	28%	28%	44%
19. Dental	84%	6%	10%
20. Pubic Area	12%	-	88%
21. Sewage	10%	4%	86%
22. Sanitary	72%	14%	14%
23. Exercises	96%	2%	2%
24. Vegetables	100%	-	-

Pubic area was defined as something to do with the teeth and all of your glands. Eighty-four percent of the respondents did not attempt to give an answer.

Vitamins were defined as tonic for blood (2), health, calcium to make iron, iron, energy, something for bones (2), and whatever you don't get in foods (3).

Venereal disease was defined as a terrible disease you get everywhere, something caught in the rest room (2), something men can get, and also as tuberculosis.

Mentally ill was defined as being depressed, not really sick--just like a cold, nervous, very sick, having damage to the brain, above average in intelligence, and mentally retarded (10 people gave this last response).

Germs were defined as something dirty, some disease (4), tuberculosis, leukemia, little things flying around, like a cold, and as having sores in the mouth.

Protein was defined as vegetables and fruit (2), starch and calories, something you drink, some kind of vitamin (4), something for the bones, calories, something like wheat, something in bottles, a drug, vitamins from meats, same as iron, fruits and cereals, and beans and potatoes.

Anemia was defined as pure blood, no blood, cancer of the blood, sugar in the blood, when your blood turns to water, when you turn yellow (2), not healthy, and when you don't know what you are doing.

Well balanced diet was defined as being able to eat a little of anything, special food, to eat regular meals, no fats (6), heavy foods, boiled meats, boiled foods, not being able to eat very much, measuring calories, liquids only, being allowed to have everything, eating so you gain, four meals a day, no sweets (2), three meals a day, eating to stay slim, eating to gain or lose, eating only what the doctor says, eating mostly vegetables, and eating whatever you want.

It is significant that six obstetric patients were in the sample and yet these women scored very low on the words pertaining to obstetrics. Only one of the six knew the meaning of uterus. The other five had an idea that it was "something inside." Out of curiosity, the interviewer asked them if they knew what happened there, and learned that they did not. None of the six obstetric patients knew the word contraceptive. One of these women thought it was a laxative. Four out of six missed the word prenatal even though they were attending a prenatal clinic at the time. Only one respondent was able to answer pubic area correctly. One woman thought it had something to do with the eyes.

It is necessary to consider that certain outside factors may have colored the results. Certain words, such as pubic area, may have received low scores because the word stimuli caused embarrassment. It was found that eighty-two percent of the respondents did not attempt to

reply to the word pubic area. It is difficult to be sure if the individual actually did not know the meaning of the word or if he was hesitant to answer because of feelings of embarrassment.

There was little difference in the scores between those in the clinic and those in the home setting. The mean score (rounded off) for subjects interviewed in the clinic was 27 and the mean score for those interviewed in the home 28. These scores are based on total points which includes one point for partial understanding. Total possible points for each respondent was 48. The range was 11 to 42 with a mean of 26.6.

Out of fifty respondents chosen at random, only three were males, all of whom were interviewed at the County Hospital. It could be expected that all those interviewed in the homes would be women, since the interviews were carried out during the daytime when the men were away. None of the respondents was employed. The 30-39 age group had the largest representation as shown here:

<u>Age group</u>	<u>No. in group</u>
15-19	4
20-29	6
30-39	14
40-49	11
50-59	10
60-69	5

The most frequently occurring level of education was sixth grade as shown below:

<u>Last grade completed</u>	<u>No. in group</u>
Sixth	16
Seventh	5
Eighth	14
Ninth	8
Tenth	3
Eleventh	1
Twelfth	3

In Table 2, scores and education of respondents are shown. Scores from 11 to 25 were arbitrarily designated as low while those from 26 to 43 were considered high. The calculated midpoint ($\frac{\text{upper limit} - \text{lower limit}}{2} + \text{Lower limit}$) was twenty-six.

In studying Table 2, it is apparent that those with less than a high school education more frequently had low comprehension scores. In order to show this pattern more clearly, the categories were collapsed to form Table 3. The comparison between education and comprehension scores yields a statistically significant finding at the .05 level (chi square), that the higher the education of the respondent, the more likely he was to give a response that showed partial or complete understanding of the words on the list.

In Table 4, scores and age of respondents are shown. Although this table shows that a higher percentage of

Table 2. Comprehension Scores by Education

Last Grade Completed	Low Range 11-25		High Range 26-42		Total	
	N	%	N	%	N	%
	6	10	62.5	6	37.5	16
7	2	40	3	60	5	100
8	9	64	5	36	14	100
9	3	37.5	5	62.5	8	100
10	1	33	2	67	3	100
11	0		1	100	1	100
12	0		3	100	3	100

Table 3. Comprehension Scores by Education (Collapsed Table)

Education	Low Range 11-25		High Range 26-42		Total	
	N	%	N	%	N	%
No High School	21	60	14	40	35	100
Some High School	4	26	11	74	15	100

Chi Square = 4.4 df = 1 P = > .05

Table 4. Comprehension Scores by Age

Age	Low Range 11-25		High Range 26-42		Total	
	N	%	N	%	N	%
Teen	2	50	2	50	4	100
20-29	5	83	1	17	6	100
30-39	6	43	8	57	14	100
40-49	3	27	8	73	11	100
50-59	5	50	5	50	10	100
60-69	3	60	2	40	5	100
Total	24		32			

people in the 40 age group produced comprehension scores in the higher range, when the data were collapsed into age groups below 40 and above 40, there was little difference. A comparison of the age distribution and scores shows that the relationship between age and comprehension is not statistically significant (Chi Square = .50) (Table 5).

Table 5. Comprehension Scores by Age (Collapsed Table)

Age	Low Range 11-25	High Range 26-42	Total
Under 40	13	11	24
Over 40	11	15	26

Chi Square = .575 df = 1 P = > .50

It is concluded, therefore, that the observed differences in performance are due to differences in educational level and that age has no significant influence on performance.

This study with fifty low-income Mexican-Americans was also intended as a comparison with an earlier study done in Florida in 1963 wherein the sample was 100 low-income Negroes. No statistical tests on the differences between Negro and Mexican-American responses could be performed as the raw data from the group of Negroes were

not available. The data that were available are shown on Figure 1 which is presented on the basis of total points scored for each word. For comparison, a similar bar graph was made showing total points made for each word by the Mexican-American group (Figure 2). These two graphs were then superimposed into a comparative bar graph shown on Figure 3. Because the study with Negroes in 1963 had a sample of 100 and the present study sample of only 50, Figure 1 is based on a total of 200 possible points and Figure 2 is based on a total of 100 possible points; however, the relationship is the same, allowing the figures to be superimposed.

In lieu of a statistical test, an arbitrary cutoff point was used to determine what could be considered a substantial difference in the scores between the two ethnic groups. Twenty-five points difference was arbitrarily chosen as the cutoff point. Therefore, any difference of 25 points or more was considered substantial and any difference below that was considered due to random error.

Using 25 points as a significant difference, Mexican-Americans scored substantially higher on the words immunization, communicable, anemia, and vegetables. Negroes scored substantially higher on the words germs and sewage. There is a probable explanation for the higher scores by Mexican-Americans on the words anemia and

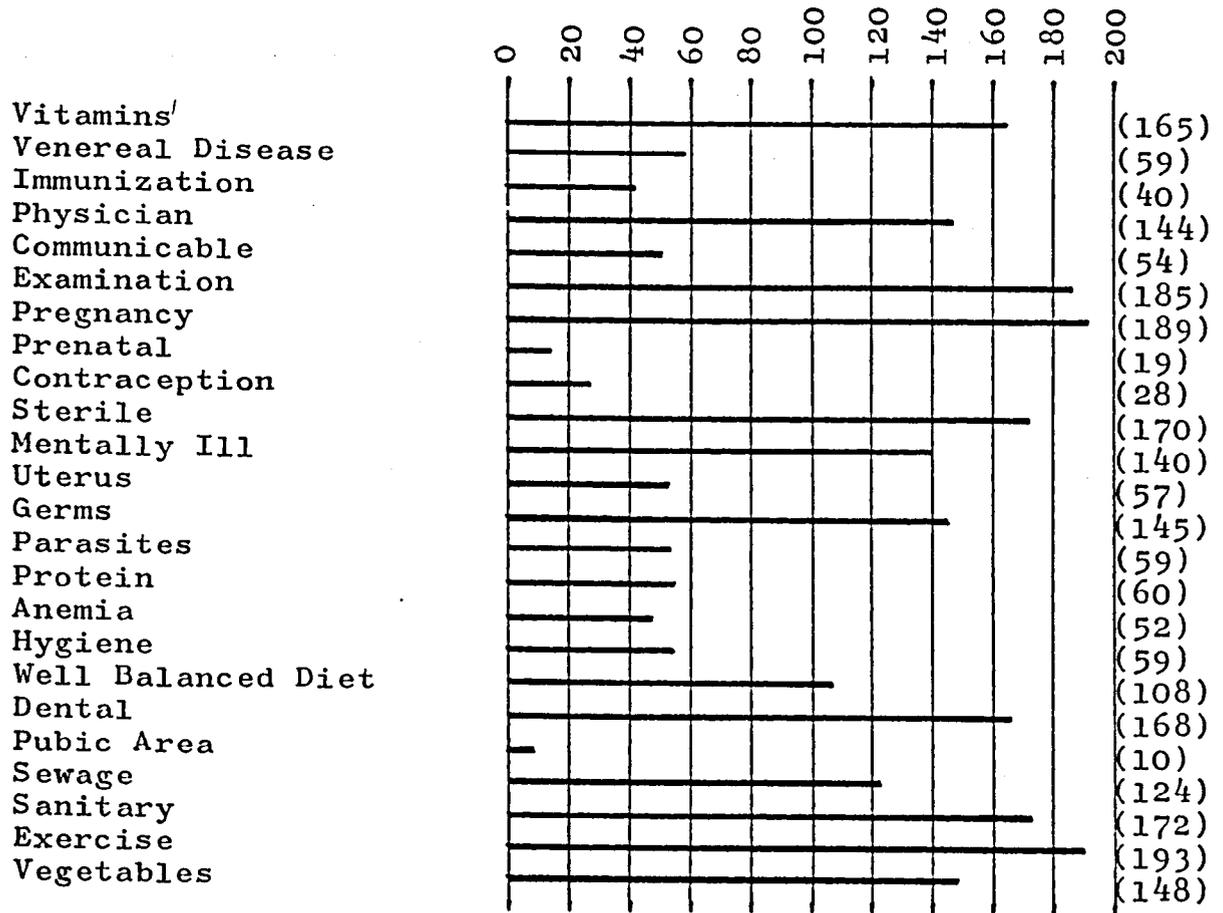


Figure 1. Level of Comprehension Shown by 100 Negroes to 24 Commonly Used Medical Terms (1963)

The total points for each word are shown in the parentheses. These scores were obtained as follows: A zero was given for "no understanding," one point for "partial understanding," and two points for "complete understanding." The total possible points for each word were 200, since there were 100 respondents.

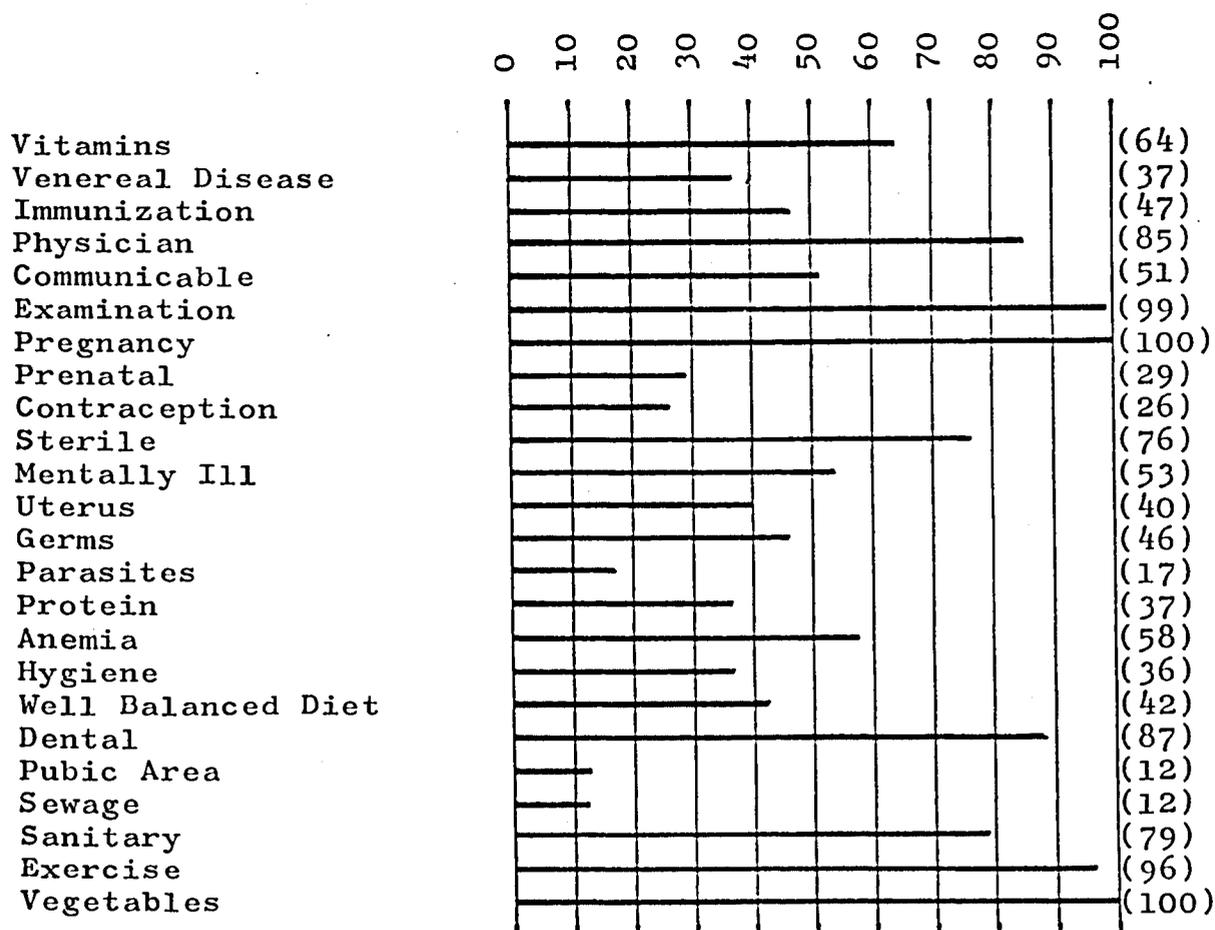
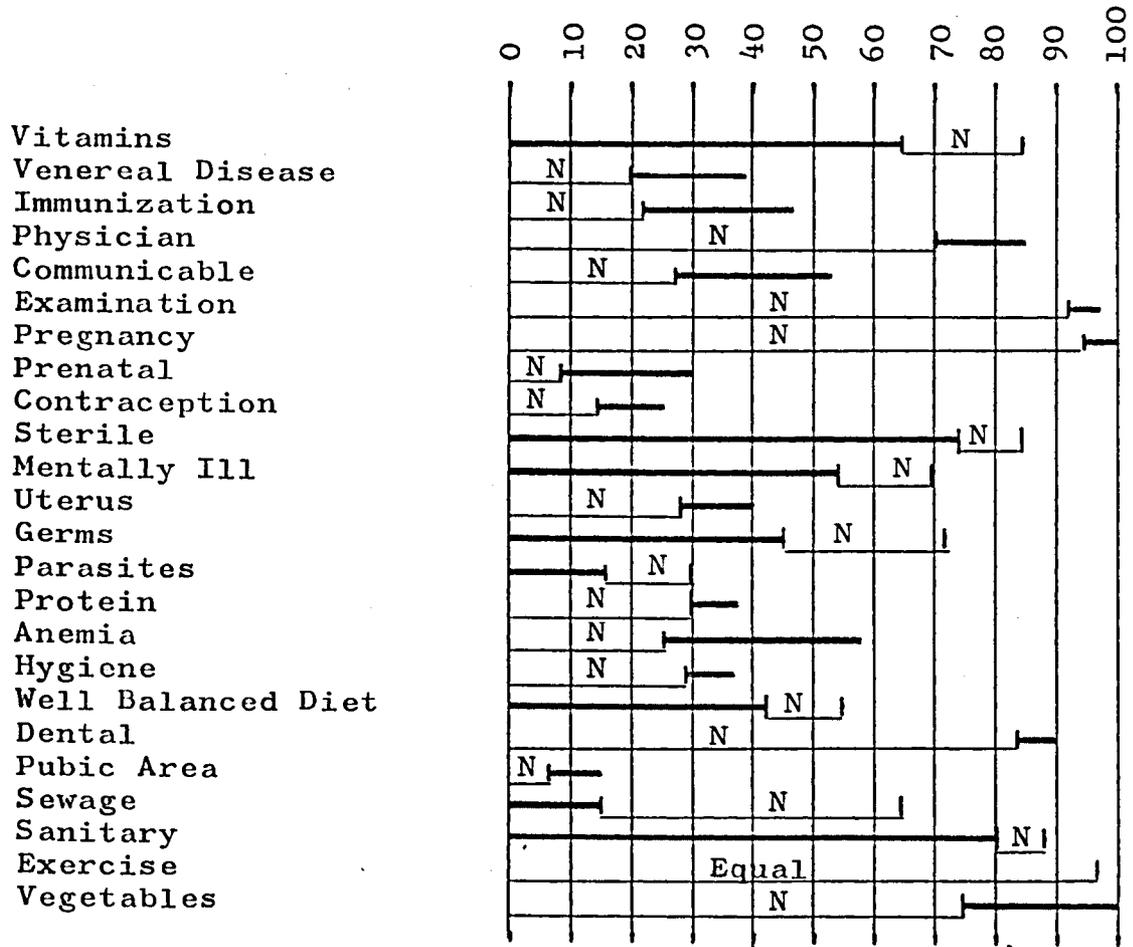


Figure 2. Level of Comprehension Shown by 50 Mexican-Americans to 24 Commonly Used Medical Terms (in Points)

The total points for each word are shown in the parentheses. These scores were obtained as follows: A zero was given for "no understanding," one point for "partial understanding," and two points for "complete understanding." The total possible points for each word were 100, since there were 50 respondents.



┌───┐ Scores of Mexican-Americans in this study
 ┌ N ┐ Scores of Negroes in 1963 study

Figure 3. Comparative Bar Graph Representing Vocabulary Scores in Each Ethnic Group

vegetables. After reviewing several unusual responses from Negroes in 1963 to the word anemia, it was discovered that the respondents had understood the investigator as having said enema. Therefore it could be said that the low scores were due to a difference in enunciation. To explain the lower scores obtained by Negroes on the word vegetables, it would have to be taken into consideration that in the South, almost all Negroes consider vegetables to be only "greens." Therefore it could be said that the lower scores were due to a cultural phenomenon. On the basis of the above explanations, the writer believes that these two words can not really be said to show a substantial difference in scores between the two ethnic groups.

The end result therefore, is that the Negro group scored substantially higher than Mexican-Americans on only two words (germs and sewage); and that the Mexican-Americans also scored substantially higher on only two words (immunization, communicable). On this basis, it might be said that there was very little difference in scores between the two ethnic groups.

CHAPTER V

IMPLICATIONS FROM THE FINDINGS

This research suggests that there is the possibility of misunderstanding or non-understanding on the part of the patient in any practitioner-patient communication, due to vocabulary deficiency. The investigator believes that the study demonstrates the need for the community health nurse and others in the health professions to consider carefully the choice of terminology used to instruct Mexican-American patients. The need for the nurse to use simple terms in talking to patients is obvious. However, one can say that oftentimes what seems simple to the nurse does not seem simple to the patient; therefore, it is important to go beyond the choosing of simple words. A nurse cannot be too careful of the words she uses, but the important thing is for her to see that the patient to whom she is speaking will know and "understand" them. Finding words that the patient knows is the easier thing. It can be seen that patients may "know" or recognize a word, however they may not understand it at all. This study shows quite clearly that in seeking the definitions of common words, many people have erroneous ideas connected with them. They have

formed private associations, but have failed to catch the original or usual meaning of the word.

When instructing a Mexican-American patient, a community health nurse may tell him that he needs a well balanced, high protein diet that includes many vitamins. The Mexican-American could interpret this in many different ways according to the results. He may think he can eat whatever he wants, with the exception that he should take tonic for blood and stress beans and potatoes. Or he may, based on the findings, assume the nurse means he should go on a diet to lose weight. He may even go home and begin to eat only boiled foods. When one examines the list of responses to "well balanced diet," one can see what a gross mistake it would be to avoid a careful explanation of the term and not get feedback.

Nurses must not fail to realize that a message which might be quite clear to one set or category of receivers, may be fuzzy to another category and completely unintelligible to a third. One cannot expect to give exactly the same instructions to each patient in the same way. It must always be kept in mind that individuals of different age, sex, personality, and socioeconomic and ethnic backgrounds may be interpreting the messages from different perceptual frameworks. This brings one to the question of perception. For a nurse to be able to communicate something to another person with success, she must be

able to perceive his particular and unique situation, and must be able to view it through his eyes, not hers. If she cannot do that, then it is her situation she is viewing, not his. She then reacts to the same situation with her background and value system which holds a high priority for health; and she begins to lose perspective completely. The nurse must try instead to use all that she knows about the particular person and to perceive his situation by "putting herself in his shoes." Only when she does this can she have any hope of reaching him and affecting him. Only by speaking words that are real to his situation and by perceiving his response in the context of HIS situation, can there be hopes for positive change in behavior patterns toward health concepts. Otherwise the work is in vain and a waste of time.²⁶

The above recommendation is not an easy one to carry out. Those in the medical profession are as guilty as others of falling into the fallacy of taking their own language as the norm for all others. A nurse not only has to make a conscious effort to remember this fallacy but must also make a conscious effort to realize how her own personal experiences color the meaning of the words she selects and how she uses them. Lewis Carroll, in Through

26. Bodil Dyhre, "Using Words," International Nursing Review, 8:63, September-October, 1961.

The Looking Glass, has a character in his book who does just that. "'When I use a word,' Humpty Dumpty said, in a rather scornful tone, 'it means just what I choose it to mean--neither more nor less.'"²⁷ Goldberg describes it in the following way:

We forget that not every word stands for something that has actual tangible existence. Spinning words, we are much like the spider spinning its web out of its own body. We however, unlike the spider, may be enmeshed in our own web.²⁸

Nobody claims that it is easy to convey a meaning accurately from one mind to another. But if the nurse wants to be successful and help the patient, she must make an extra effort to do so. The investigator believes that few nurses have given enough thought to the factor of words. The nurse must see it as her task to interpret for her patients the medical and nursing terms that have no meaning or false meaning for them. She must always evaluate the patient's understanding of the concept being communicated. This could be done by having the patient repeat the instructions in his own words. If a misconception is expressed, further explanation should be given and the process repeated. By using this method of

27. Lewis Carroll, Through The Looking Glass, (Mt. Vernon, New York: Peter Pauper Press, 1941), p. 114.

28. Isaac Goldberg, The Wonder of Words, (New York and London: D. Appleton-Century Company, 1939), p. 297.

evaluating the patient's understanding, she may likely find that even simpler instructions may be necessary or that an important concept may have been omitted. Repetition of the above process in subsequent contact with the patient would enable a more complete evaluation of the patient's comprehension. The reader should take into consideration the fact that many of the words used in health teaching are indeed much more difficult than the ones that were selected for the list used in this study.

In the theoretical framework, the investigator discussed the idea that communication deals with the penetration of boundaries. In communication, information is exchanged in a two-way fashion. This implies, of course, that the nurse is receiving information from the patient also. Before she begins instructing him, she gathers information from him about his symptoms of illness, knowledge of disease, culture, and feelings. Because she may not understand his jargon either, the investigator suggests that the nurse also give the patient feedback to see if she really understands what he is trying to tell her. Unless she takes this measure, how can she be certain what the words represent to the patient?

In evaluating any attempt at communication, one might keep the following questions in mind:

1. What was the intent of the sender?
2. What was the interpretation of the receiver?

3. What is the amount of consensus achieved between the sender and the receiver?²⁹

Because of the similarity of the results between this study with Mexican-Americans and an earlier study with Negroes, both of low income groups, one might conclude that socioeconomic status, which was the common factor to both groups, does indeed affect communication. These findings would tend to support earlier mentioned studies done by Schatzman and Strauss that show observable differences in communication according to social class. To further test this, it would be beneficial to question a group of low income whites, using the same vocabulary list provided here.

Another idea for further studies would be to use a control group to evaluate the community health nurses' expectations of how their patients would comprehend this list of twenty-four words. It might prove valuable to see a comparison of what is expected or assumed and what is actually found.

It is hoped that this investigator's attempt to add to the knowledge of human relations and understanding of medical terminology in nursing will eventually result in better patient care.

29. Jurgen Ruesch, Nonverbal Communication (Berkeley: The University of California Press, 1956), p. 10.

CHAPTER VI

SUMMARY

The initial problem under investigation in this study was that of determining how clearly patients seen by community health nurses understand the words commonly used by those nurses. It was the belief of the investigator that very often problems associated with care and treatment of the ill are related to the fact that health workers and patients come from different socioeconomic and cultural groups, and that these groups have different vocabularies and ways of communicating from each other. Adding to this the fact that each person tends to interpret words according to his individual experiences and private associations; one can see that the patient and nurse could almost be speaking to each other in a foreign tongue, even though they are both using English. Since communication is basic to any beneficial patient-nurse relationship, this study was planned as an attempt to obtain a measure of the extent to which patients might be failing to understand meanings of frequently used words.

A structured interview technique of questionnaire was used with fifty Mexican-Americans of low socioeconomic status. A list of twenty-four selected words commonly used

by community health nurses was verbally presented to these people. Half of them were interviewed in the clinics of the local county hospital and half of them were interviewed in their homes in the community. The socioeconomic status was held constant by the areas selected. The interviewees were all selected at random and there was no discrimination as to sex or education. The only requirement for age was that they be over sixteen. To control the language factor, only those who were bilingual were used and anyone without at least a sixth grade education in an English speaking school was eliminated.

It had been speculated that a significant number of the words from the list would be beyond the capacity of those in the sample, even though the words appear to be simple. This was born out in the results. The findings revealed that only two words were completely understood by all of the respondents. Little or no understanding was shown to the other thirteen words. This is to say that over half of the words were not understood by the respondents. Some of the erroneous answers given were presented to show how easily instructions could be completely misinterpreted.

The above findings strongly support the premise that the typical Mexican-American patient of low socioeconomic status does not comprehend many words commonly used by medical personnel, specifically nurses. The results

show that if health workers assume that the patients comprehend these words, communication will be obstructed. It is obvious then that the language used and the way it is channeled must be adapted to the persons for whom it is intended.

Nurses must not only train themselves to think before they speak and to select simple words carefully, they must interpret for their patients those medical and nursing terms which have no meaning or false meaning for them. More important, to insure understanding, they must get feedback to determine whether the interpretation of the receiver was the same as the intention of the sender. Few patients, when talking with doctors and nurses, want to say that they do not understand. They will often say "yes," or "yes, mam," even if they are distinctly asked, "Do you understand?" It is up to the nurse to get actual feedback. Health personnel should consider this quote from Oscar Wilde in "The Birthday of the Infanta":

They did not understand a single word of what he was saying, but that made no matter, for they put their heads on one side, and looked wise, which is quite as good as understanding a thing, and very much easier.³⁰

30. Oscar Wilde, "The Birthday of the Infanta," Complete Works of Oscar Wilde (New York: National Library Co., 1905), p. 50.

APPENDIX A

QUESTIONNAIRE

Respondent # _____ Age _____ Sex _____ Locale _____

Educational Level: Elementary High school College
 Circle one completed: 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4

U N D E R S T A N D I N G

Meaning word has to
 respondent if it is
 erroneous to nurse.

	<u>None</u>	<u>Partial</u>	<u>Complete</u>	
1. Vitamins	_____	_____	_____	_____
2. Venereal Disease	_____	_____	_____	_____
3. Immunization	_____	_____	_____	_____
4. Physician	_____	_____	_____	_____
5. Communicable	_____	_____	_____	_____
6. Examination	_____	_____	_____	_____
7. Pregnancy	_____	_____	_____	_____
8. Prenatal	_____	_____	_____	_____
9. Contraceptive	_____	_____	_____	_____
10. Sterile	_____	_____	_____	_____
11. Mentally Ill	_____	_____	_____	_____
12. Uterus	_____	_____	_____	_____
13. Germs	_____	_____	_____	_____
14. Parasites	_____	_____	_____	_____
15. Protein	_____	_____	_____	_____
16. Anemia	_____	_____	_____	_____
17. Hygiene	_____	_____	_____	_____
18. Well Balanced Diet	_____	_____	_____	_____
19. Dental	_____	_____	_____	_____
20. Pubic Area	_____	_____	_____	_____

- 21. Sewage _____
- 22. Sanitary _____
- 23. Exercise _____
- 24. Vegetables _____

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