THE IMPACT OF NEUROLINGUISTIC PROGRAMMING RAPPORT SKILLS TRAINING FOR REGISTERED NURSES ON ONE-ON-ONE TEACHING OF ACQUIRED IMMUNE DEFICIENCY SYNDROME PREVENTION

by

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(ABSTRACT)

Nurses teach to maintain health and prevent disease. Rapport and good communication skills are especially required when teaching such sensitive subjects as prevention of sexually transmitted diseases, including acquired immune deficiency syndrome (AIDS). Neurolinguistic programming (NLP) is a communication technique that proposes to enhance rapport. Rapport is enhanced by the use of a combination of verbal and nonverbal techniques where the individual is matched and mirrored by the interviewer and verbal communication follows the sensory system most preferred by the speaker.

The study investigated the effect of NLP as a rapport builder and teaching technique in one-on-one nurse-client teaching transactions including client satisfaction with the relationship and retention of knowledge of AIDS prevention information.

A quasi-experimental design was used. Volunteer nurses

were trained to teach AIDS prevention. Their adult volunteer clients were the treatment group. The control group of clients were taught by the nurses using the basic AIDS prevention curriculum. The two groups were compared according to the results of pre-test/post-test knowledge scores and satisfaction ratings for the nurse teacher.

Data was analyzed using analysis of covariance and analysis of variance. There were no statistically significant differences between the two groups. Qualitative data was collected after the completion of the teaching that supported usefulness of the techniques for teaching. Further studies were recommended.

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CHAPTER I

Statement of the Problem

Introduction

This study examined the effect of training for registered nurses using a communication technique that proposes to increase client trust and understanding. The skills were applied to one-on-one informal teaching interactions of disease prevention. Teaching health promotion and disease prevention information is a unique and primary role for nurses. They have both expert knowledge of diseases and their prevention and daily direct contact with the public in health care settings. Nurses must be able to readily communicate to establish trust and provide instruction at the client's level so that adequate comprehension is attained. Such communication skills are the basis for successful one-on-one teaching interactions. If nurses are able to develop these skills they may become more comfortable and successful teaching clients, especially such sensitive subjects as prevention of sexually transmitted diseases - including AIDS (acquired immune deficiency syndrome).

Background of the Problem

Nurses are taught to care for the whole client

including physical and psychological needs. Various methods are used to assist the client including physical assessment, providing treatments and medication as prescribed by the physician, and communicating with clients to assess their needs and the response to treatments.

Teaching Role of Nurses

One major role of the nurse that is implied, but not directly addressed, in most nursing curricula is that of teacher. Nurses have a role in providing necessary information for recovery from and prevention of illness, through informal and formal instruction. Nursing curricula have courses in physical assessment and content on all the medical, surgical, pediatric, obstetric, communicable and psychiatric illnesses so that a solid theoretical knowledge base is formed. Nursing licensure is based on demonstration and application of this knowledge. Client education is a component of all state licensing exams but little content is provided in the curricula to assist the nurse to develop the necessary skills. The National League for Nursing (NLN) in 1976 organized a workshop on "Who Is Teaching the Patient". One speaker and nursing education expert, Lilah Harper, identified the need for patient education "to come to the forefront of our collective efforts if we are going to keep pace with national health care trends"(National League for Nursing, 1976, p.2). Dr. Donald Bille, a nurse educator,

author, and expert on patient education, stated that the role of nurse as teacher is assumed but not directly addressed in curricula. "The content may be integrated into the courses but rarely would a lecture, much less a course on teaching techniques, be found at the undergraduate level. Few even exist at the Master's level of nursing education." (Unless a specific practicum in education is part of the students program.) Nurses claim they do not have time to teach but in reality, they are hesitant to teach because they do not know how (Dr. Donald Bille, personal conversation, June 22, 1987). Authors in respected nursing journals have identified that nurses have inadequate preparation to teach (Ackerman, Partridge & Kalmer, 1981; Dodge, 1972; Faulkner, 1983; Jenny, 1978; Graham & Gleit, 1980; Syred, 1981).

Client teaching and health maintenance are an integral part of the registered nurse's role. Individual programs may provide general guidelines for teaching adults but there are no standards for this content. Registered nurses prepared by Associate degree and Diploma Hospital School programs where curricula are specifically developed for the technical areas of nursing practice are not taught how to teach. A study done by Pohl in 1965 found this true for the diploma nurses she surveyed. The subject of the teaching role for nurses is one that has attracted little attention from nurse

researchers. Many of the studies cited are old but according to Dr. Barbara Redman, a nationally renowned expert in nursing, (personal conversation on June 16, 1987) few research studies on the subject have been done and Pohl's 1965 study remains the most comprehensive one to date.

Despite the lack of instruction on teaching, the role of nurse as teacher becomes essential once the nurse begins to practice. Nurses immediately become "experts" in health information in the eyes of the public and have frequent opportunities to teach their clients. As a member of the health care team, nurses usually spend more time with their clients than physicians. This contact provides the opportunity to develop rapport and build trust, to assess individual learning needs, and to provide instruction. Hospital nurses are expected to be able to explain all treatments and medications they are giving, and to answer questions clients may have about symptoms they may be experiencing. Nurses serve as intermediaries to help the client formulate questions and interpret what the physician has said if the language used is too complex. This informal, one-to -one teaching is frequently encountered in nurse-client interactions.

Nurses are unclear of what teaching is and what their role in patient teaching should be. A significant number of nurses refused to answer questions on teaching stating they

provided bedside care but did not teach (Pohl, 1965). In addition, the concepts of teaching held by a large proportion of the practitioners were unclear. This was in spite of the fact that American Nurses' Association (1963) statements of functions, standards, and qualifications included teaching as a function of all these workers, as do the Standards of Practice. Monteiro (1964) noted that in her experience bedside nurses often viewed teaching as formal instruction and therefore missed the opportunity for informal teaching.

Although elements of nursing care have changed in the last two decades, historically several problems with teaching done by nurses have been reported (Streeter, 1953; Brown, 1956; Spearman, 1961). Other authors have written of aspects of health teaching by various groups of nurses as being inadequate (MacArthur, 1953; Safford & Schlotfeldt, 1960; Nite & Willis, 1964; Skipper, 1965; Olive & Olive, 1985).

More recent studies have identified why nurses do not teach even though it is expected of them (Ackerman et al., 1981; Graham & Gleit, 1980). Some of the major reasons were lack of knowledge about content, inadequate knowledge of teaching skills and lack of skill in using them, and lack of responsibility in assuming the functions of a health educator. Formal course work in teaching and in-service

preparation were suggested as means of overcoming deficiencies in preparation (Redman, 1980). Murdough (1980) proposed that teaching efforts conducted by nurses fail because of a lack of knowledge of teaching-learning principles. A course in teaching-learning influenced nurse teaching effectiveness in this study.

Lack of time, heavy work load, and insufficient staffing have been reasons nurses listed for not teaching (Pohl,1965; Powell & Winslow, 1973; Faulkner, 1983). These problems are likely to exist today with the current hospital nursing shortage, the increase in acuity of hospitalized clients, and the shortened length of hospital stay as mandated by the federal government for cost reimbursement according to D.R.G.'s (diagnosis related groups.)

As early as 1974, registered nurses listed teaching as a major component of their job (U.S.D.H.E.W., 1977). Nurses in occupational health, physicians' offices, and health centers consider health teaching one of their most important responsibilities. The Nursing Practice Acts reinforce this responsibility for health education. The NLN (1977) document detailing Nursing's Role in Patients' Rights includes the right of the patient to have appropriate health education from health care personnel.

Time spent in health education activities should be viewed as a responsibility and challenge for effective

health care. Appropriate health education may be more effective than surgical or pharmacological treatment especially in the area of disease prevention. Most clients' lack the knowledge necessary for them to promote health (Rankin & Duffy, 1983). Nurses need to continue and step up their efforts in client teaching, or the vacuum will be filled by others more interested or more qualified (Saperstein & Frazier, 1980).

Nursing organizations conduct needs assessments to determine what content should be included in continuing education courses. In 1982 the National League for Nursing commissioned Arthur D. Little to study the markets for NLN products and services in nursing education and nursing service. As a result, a need identified as a top priority for all levels of nursing was continuing education in teaching strategies (Litwack, NLN, 1985). The teaching function is increasing in importance as the nursing role is expanding. State nursing practice acts now allow nurses to provide anticipatory guidance to clients and implement health education and health counseling without physician supervision. Increasing autonomy among nurses allows them to more fully develop health-promotion and prevention strategies that are effective in a variety of settings (Pender, 1982).

In many cases, illness results from a lack of care directed toward prevention. Nurses at the forefront of professional practice are assuming an increasingly important role in health protection (prevention). Nurses assist individuals gain the necessary knowledge to maintain their health and prevent disease through health education and health counseling. "The emphasis on prevention to avoid costly treatments in an acute care facility requires nurses to have a good knowledge base in illness prevention and to be skilled in teaching consumers about health care" (Puetz & Peters, 1981, p.2).

Teaching and Therapeutic Communication

The teaching role of nurses in one-on-one situations is part of the larger domain of therapeutic communication. The ability to communicate in such a way as to be trusted and understood by the client is the foundation of the relationship. This ability to establish a comfortable relationship with another person is called rapport. Through therapeutic communication, a positive, constructive relationship is formed with the learner; this is the first step toward bringing about a climate that will encourage the learner's cooperation. "Good rapport will not of itself guarantee successful teaching, but it is a condition that facilitates teaching" (Pohl, 1981, p.38).

Nurses use rapport skills in a variety of ways. In hospital settings nurses assist clients to feel at ease when they are admitted so they can gather essential information about the reason they are seeking health care. Nurses use communication skills to evaluate the client's response to treatments and medications. When the nurses teach clients to care for themselves, communication must be at the client's level in order for the information presented to be understood. Psychiatric nurses must possess high levels of rapport building and communication skills in order to gain client trust and assist them in finding solutions to their problems. Nurses in doctors' offices and the community need to communicate effectively in order to deliver the care their clients' require. Therapeutic communication, including rapport skills, is an essential interpersonal competency that nurses need. When it is well developed, client health teaching towards the prevention of disease is more likely to be successful (Sundeen, Stuart, Rankin & Cohen, 1985).

Competence in therapeutic communication is important for several reasons. First, communication is the tool used to convey information and exchange thoughts and feelings. Second, communication can be used to influence the behavior of another. Patient education is one nursing intervention where the desired outcome is behavioral change in the

individual so that a maximum level of wellness is attained. When assisting clients, nurses serve as models and influence their patients, whether they want to or not. Both verbal and nonverbal communication has an impact on the learner.

Teaching for Prevention of Sexually Transmitted Diseases

One area in which therapeutic communication skills are essential is in teaching about sexually transmitted diseases (STD). Rosemarie Hogan (1980), a nursing expert on sexuality, notes the need for nurses to develop:

> the ability to discuss sexuality in a frank, unembarrassed, objective manner...Needed communication skills include the ability to create an environment that is non-threatening ...in order to facilitate expression of underlying concerns. Sensitivity in listening for and observing nonverbal cues that indicate sexual concerns, skill in the techniques of questioning, reflection, clarification, and validation is essential so that the nurse accurately perceive what the patient is expressing and feeling...The ability to listen and to use silence constructively is vital.(p.24)

There has been a rise in the incidence of sexually transmitted diseases in recent years. Control and prevention education is needed. A study done by Holmes and Stilwell (1977) claimed that the increase in infection rate of STD was compounded by the fact that doctors and other health care professionals were reluctant to deal with the problem- and thus might have been partly responsible for the high rate of disease. They concluded that training in STDs for doctors, nurses, and other health care workers was relatively superficial and tended to ignore the important sociological and prevention aspects of the diseases. Their study has not been repeated. With the "new" STDs taking hold, and STDs in general being recognized as one of the most complicated areas of the field of infectious diseases, improved education of health care workers should probably be a high priority (Holmes & Stilwell, 1977; Edwards, 1978). Health educators have the responsibility to make STD education more pertinent and ultimately, more effective (Yarber, 1978).

The World Health Organization (WHO) placed education as a high priority to prevent the spread of STDs (Hart, 1986). Specifically, "the health worker must know how to talk to the patient" (Zacarias, 1986, p.21). Strategies for sexual counseling include open communication, acceptance, showing warmth and understanding, using the client's own language,

and realizing that the actual words spoken, tone of voice, and nonverbal behavior will be closely observed by the individual (Murray & Zentner, 1985; Owens & Brown, 1986; Williams, 1986). Sexually transmitted diseases include syphilis, gonorrhea, chlamydia, and most recently acquired immune deficiency disease (AIDS). All of these diseases are known to be spread by sexual contact with infected persons.

C. Everett Koop (1986), the Surgeon General of the United States, writes: "AIDS (Acquired Immune Deficiency Syndrome) is a life-threatening disease and a major public health issue. Its impact on our society is and will continue to be devastating. By the end of 1991, an estimated 270,000 cases of AIDS will have occurred with 179,000 deaths within the decade since the disease was first recognized. AIDS is preventable " (p.1). In Baltimore, the number of new cases of AIDS doubles every nine months. Nationwide, the number of cases now doubles once a year. Of the up to a million people who may have been infected with the virus, its expected that 1 to 2 percent will develop AIDS during the next year (Finkbeiner,1986).

A May, 1987 CBS radio report stated that fear of contracting AIDS was the number two health concern of a survey of adult Americans, fear of cancer remained number one. The Washington Post, on May 26, 1987, reported the results of a telephone random survey of 436 people conducted

by the University of Maryland Survey Research Center from May 6 to May 18, 1987 that Marylanders overwhelmingly favor providing AIDS education courses in public schools. Ninety-seven percent of those polled favored AIDS prevention teaching ("Maryland Favors",1987). Unless individuals believe that their health behavior directly affects their health state and future health outcomes, little motivation exists to engage in health-promoting and health-protecting behaviors (Pender, 1982, p.19). If clients are to actively take control of their own health, health care professionals must share knowledge openly, reinforce independent behavior, and provide an environment for health care delivery in which the uniqueness of each client is recognized, accepted and enhanced (Pender, 1982, p.20). The communication technique used to present health teaching greatly influences how the information will be received by the client. Education about sexually transmitted diseases, including the role of sexual intercourse in the transmission of AIDS, requires skillful communication on the part of the nurse. The nurse teacher must first establish rapport so that the individual can feel comfortable enough to discuss such subjects as sexual practices and the use of condoms, two of the topics that are essential to teach about if the spread of AIDS is to be controlled.

Neurolinguistic Programming

One communication technique, Neurolinguistic Programming (NLP), may have important application for nurses who teach information about sexually transmitted diseases. NLP is a communication technique created by Richard Bandler and John Grinder in 1975. The roots of NLP are found in the skills of two master communicators: Milton Erickson and Virginia Satir.

Milton Erickson, who died in 1980, was a psychiatrist and is considered the father of modern day hypnosis. He developed acute powers of observation during two severe bouts of poliomyelitis which left him so paralyzed he was not expected to walk or talk. He used his powers of observation and a flexible approach when assessing and communicating with his clients. His ability to utilize the behavior of the client in his own communication and treatments is well known. Erickson also used body language and shifts in voice tone to induce hypnotic trances in his clients. Virginia Satir, a social worker and world renowned expert in family therapy, is known for developing intense rapport with each family member. On close observation, it was discovered she had developed

> "a way of breathing with the individual, of assuming a body position that was similar to or exactly like the client's and of using the

> person's preferred words. She instinctively listened to the client's choice of predicates (verbs, adjectives, adverbs) and based on those choices she determined how clients represented the world to themselves" (Knowles, 1983, p.1011).

Bandler and Grinder observed these experts and analyzed the skills used to develop and form trusting relationships. From these observations they created NLP. NLP is defined as a way of organizing and understanding the subjective structure of experience and the ways in which people process information (Knowles, 1983).

NLP can be used to determine the best method for communicating with another individual. The interviewer using NLP uses a combination of mirroring of body posture and significant gestures, matching voice volume, tone, tempo, and breathing as well as observing eye accessing cues and use of predicates in order to match the person's auditory, kinesthetic or visual processing (Knowles, 1983). NLP has been used in sales, counseling and management in both the public and private sectors. Current courses offered in the Washington, D.C. metropolitan area are targeted for sales and real estate personnel. Other courses are available across the country for lawyers, doctors, managers and therapists. During interactions, the trained NLP

practitioner is seen as someone who behaves, talks and apparently thinks just like the person they are talking to. Rapport is quickly established once trust is gained, and the individual is more willing to accept what is being said since it is presented in such a manner as to be similar to the client's own thoughts. Such rapport would be useful in nurse-client one-on-one teaching interactions, especially when teaching disease prevention. Any technique that can be utilized to increase nurses communication skills is considered valuable. Improvement in communication techniques would improve their teaching ability, aid nurses in their career development and should foster greater client satisfaction with the nurse. If information is presented in such a way as to be similar to that used by the client, there should be greater understanding of AIDS prevention information. As such use of NLP and provision of NLP training for nurses may be very useful in enhancing health teaching.

Statement of the Problem

The problem to be investigated in the study is: What is the effect of NLP as a rapport building and teaching technique in enhancing the one-on-one nurse-client teaching transaction including client satisfaction with the relationship and retention of knowledge of AIDS prevention?

Purpose of the Study

It is the purpose of this study to determine if the use of NLP rapport skills is of benefit to nurses. Specific questions to be examined in this study include: (a) Can NLP rapport skills can be successfully taught to nurses, (b) Is there a difference in the knowledge retention of clients taught information on AIDS prevention by nurses using NLP rapport skills when compared with a control group of clients, (c) Does the use of NLP rapport skills by the nurse increase the client's satisfaction with the nurse, (d) Do nurses identify NLP rapport skills as useful to their own nursing practices, and (e) Do nurses plan to continue to use the NLP rapport skills in their nursing practice.

Significance of the Study

This research is aimed at testing NLP rapport skills techniques in nursing practice. The study is designed to apply the techniques to actual client-teaching interactions.

The practice of nursing involves one-on-one teaching interactions. Communication is an essential part of the teaching relationship. Skills training that aids in building a therapeutic relationship with a client so that the actual teaching can begin would be useful to nursing practice. Current nursing textbooks list a variety of techniques for gaining client trust so that a therapeutic relationship can

be formed. The practice of NLP rapport skills techniques is said to enhance rapport. No one technique is universally effective, but the study may show NLP rapport skills to be valuable when used by nurses during one-on-one client teaching interactions. If this can be demonstrated, these techniques should be included in nursing communication instruction and curricula.

Definition of Terms

The following terms are defined for use throughout this study. With the exception of the definition for AIDS, the terms were drawn from the American Society for Training and Development's Neurolinguistic Programming Network Resource Manual (1986):

Access - to retrieve and/or construct information (pictures, sounds/words, feelings, tastes/smells) internally.

Accessing cues - external behaviors (such as eye movements, head tilt, body movement) that indicate how a person is processing information internally (visually, auditorially, kinesthetically).

Acquired Immune Deficiency Syndrome (AIDS) - the end result of infection with the human immuno-deficiency virus contracted by contact with infected blood or body secretions generally through sexual intercourse with an infected

partner or sharing contaminated intravenous drug needles. A lethal disease with no known cure at this time.

Auditory - of or relating to what someone hears (internally or externally).

Kinesthetic - relating to what one feels (internally or externally), body sensations.

Lead - direct or move someone to a new experience.

Match - copy or replicate behavior, specifically someone's words, voice tone or tempo, mood, belief system and/or body language in order to establish rapport.

Mirror - match behavior you can see.

Neurolinguistic Programming (NLP) - a system for understanding human behavior and communication developed by Richard Bandler and John Grinder in the 1970's; the study of subjective experience.

Pace - match the behavior (verbal and/or nonverbal), mood or interests of someone, usually to establish rapport before leading that person to new behavior, beliefs, mood or interests.

Predicates - process words (verbs, adjectives, adverbs), which either specify the process (seeing, hearing, feeling or smelling/tasting) utilized internally by the speaker of the words, or are nonspecific (not indicating

which representation system is utilized; e.g., think, learn, change).

Rapport - the state of being in tune with, in alignment with, seeing eye to eye with someone else, or with oneself; the establishment of trust, harmony and cooperation in a relationship.

Representational systems - internal systems or ways of thinking about things, specifically through the various sensory modalities (visual, auditory, kinesthetic, olfactory/gustatory).

Tempo - the rate of speed at which someone speaks.

Tone - the pitch, or highness/lowness of someone's voice.

Visual - of or relating to what is perceived through the sense of sight.

Limitations

There are several possible limitations to the study. The sample size is small and the possibility exists that biases will affect the study. The Hawthorn effect may influence the communication skills of both the treatment and control groups. Instrument validity for measuring both the satisfaction of the clients and the use of NLP by the nurses will have to be established. This will be accomplished by

using the tools on 15 to 20 patients. Interrater reliability will be controlled. Videotaping can be a stressful procedure and may affect the ability of the nurses to correctly utilize the newly obtained NLP skills.

There are limits to the design as it is not a true experimental design. The subjects are not randomly selected from the population at large. The investigator will be doing the training and may bias the nurses by conveying her own enthusiasm for the subject of NLP. This will be controlled by having two nurses trained by the investigator train two other nurses to see if the skills can be duplicated without the investigator.

The subject of AIDS may evoke negative feelings in the volunteer clients and may impact on the overall satisfactory rating for both groups of nurses. Volunteer clients will be taught at different times and history may affect their knowledge, interest and attitude toward the subject of AIDS prevention. Establishing rapport is only one part of the complex phenomena of communicating and this may cause the study to to "fall short" of effecting the results anticipated.

CHAPTER II

Review of Related Literature

Introduction

Health education, toward the goal of disease prevention, is a fundamental part of the nurse's role. Basic to the success of such teaching is the ability to communicate with the client. Literature will be reviewed in this chapter that pertains to health education, human behavior and disease prevention, therapeutic communication, and neurolinguistic programming.

Theory and Development of Health Education

Health educators use various methods to inform, motivate, and assist people adopt and maintain healthy practices and lifestyles. They advocate environmental changes as needed to facilitate this goal, and conduct professional training and research to the same end (Preventive Medicine USA, 1976). Nurses today face the challenge of developing the educative component of nursing practice. Through health education, positive health practices can be encouraged. This would have an impact on the health delivery system as clients assume more responsibility for their own care.

Historical Background of Health Education

Historically nurses have been involved in health

teaching since the beginning of professional nursing. Florence Nightingale, in the 1850's, wrote guidelines for the care of patients that included techniques such as changing bed linens, washing hands and airing out the rooms to prevent the spread of disease. Nurses in turn taught these techniques to their patients. Nightingale felt the real test of the effect of health education was whether patients practiced what they had been taught in their homes (Nightingale, 1859). Lillian Wald (1915), in the early 1900's stressed the teaching role. She instituted instructional programs in home nursing for patients' families, courses for new mothers, children, and invalids.

Health education has been practiced for more than a century. The curricula in schools of nursing began to include preparation for teaching as early as 1918 (National League of Nursing Education, 1918). Curriculum content in 1935 identified the nurse as a teacher (National League of Nursing Education, 1937). Teaching skills and a knowledge of teaching-learning principles was included in nursing curricula in the 1950's (National League of Nursing Education, 1950). Beginning in 1963, health education was listed as a subject heading in the Index Medicus for the first time (U.S. Department of Health, Education and Welfare, 1963).

The American Society for Health Manpower Education and Training was established in the 1970's and included members who were patient education managers. President Nixon in 1973 appointed a Committee for Health Education and established the Bureau of Health Education and Health Promotion within the Centers for Disease Control (Bordley & Harvey, 1976).

In 1974, the Task Force on Health Promotion and Consumer Education, sponsored by the John E. Fogarty International Center for Advanced Study in Health Sciences, National Institutes of Health and the American College of Preventive Medicine, proposed that health education is a process that bridges the gap between health information and personal health practices. As a result of the findings of this task force, support and encouragement in health education increased. Health education for the public was listed as one of the ten health priorities in the National Health Planning and Resources Development Act of 1974 (Public Law 93-641). In addition, HEW specified a set of health education initiatives as one of the goals of the Forward Plan for Health for Fiscal years 1976-1980 (Appelbaum, 1979, p.112-120). The U.S. Department of Health and Human Services' 1980 Objectives of the Nation for Promoting Health and Preventing Disease includes references to education as a means of improving health.

Goals and Application for Health Education

The ultimate goal of health education is the improvement of the nation's health and the reduction of preventable illness, disability, and death. Health education attempts to influence directly behavioral factors relevant to health. This is accomplished through specific health education efforts including (a) informing people about illness and ways they can protect their own health, (b) informing individuals about relevant risk factors and ways in which they can decrease personal level of risk for specific diseases, and (c) motivating people to want to change to more healthful practices.

The public, in turn, relies heavily on health care personnel as a source of such information. In a national sample of 659 adults, Freimuth and Marron (1978) found that 71 percent of the population reported receiving information from care health personnel, the reliability of the information was estimated by the public to be 91 percent. Fifty-one percent of the population reported getting health information from public service announcements, with an estimated 77 percent reliability. Forty-nine percent received information from family and friends, with a 50 percent reliability. Results of the study reported that health care personnel are the most frequent and most trusted sources of health information.

Wallston, Maides, and Wallston (1976) found that both the value placed on health and perceptions of control of health affected the extent to which young adults sought written information on high blood pressure. Those with internal control who placed a high value on health were more likely to request information than those with internal control with a low value placed on health. The importance of perceived control in predicting the occurrence of preventive behaviors was studied by a number of researchers (Kirsch, 1972; O'Bryan, 1972; Balch & Ross, 1975; Kaplan & Cowles, 1978).

"Clients' personal definition of health will determine the content that they view as meaningful in health education. When health is defined as maintaining stability or avoiding overt illness, health protecting behaviors are most important to the client" (Pender, 1982, p.159).

Theory of Human Behavior as it Relates to Disease Prevention

A review of the theoretical basis of prevention shows the relevance of focusing client education efforts on prevention of disease. A description of human behavior as a basis for prevention includes consideration of behavior that integrates biologic, psychologic, sociologic, and ecologic dimensions of human life. Five dimensions of human behavior: purpose, motivation, awareness, control, and complexity are

said to strongly influence health behaviors of clients (Pender, 1982).

Purposeful, goal-directed behavior is an important characteristic of human beings. Experiences, present internal state, and the environment determine the priority for goals for an individual. Behavior is determined by goals; therefore, behavior is always directional (Rotter, 1971, p.89).

Human beings are capable of valuing and prioritizing options available to them. Internal cognitive processes determine what information will be received from the environment and how it will be interpreted and structured. This, in turn, determines the goals that persons select. When a specific behavior is said to lead to the attainment of a desired goal, the behavior will be evaluated as positive, and the probability of the occurrence of the behavior will be increased (Rotter, 1971, p.89). Individuals exhibit those behaviors that lead to the greatest immediate or future satisfaction, given the current range of behavioral options available.

"Clients' personal definition of health will determine the content that they identify as meaningful in health education. When health is defined as maintaining stability or avoiding overt illness, health protecting behaviors are most important to the client" (Pender, 1982, p.159).

Individual perceptions "that affect readiness and motivation to learn include: importance of health, perception of health control, and perceived benefits of health-promoting behavior" (Pender, 1982, p.156).

While the concept that all behavior is motivated is agreed upon, researchers have been unable to predict sources of motivation for specific health behaviors. The Health Belief Model developed in the early 1950's by Rosenstock, Hochbaum, and Kegels includes some possible explanations of human behavior that may account for compliance with disease preventive behaviors.

"An individual's own estimated subjective probability that he or she will encounter a specific health problem constitutes perceived susceptibility" (Rosenstock, 1966, p.104). "A number of studies have shown the importance of perceived susceptibility as a predictor of preventive behavior" (Rosenstock, 1966; Kegels, 1963; Becker, Haefner & Kasl, 1977).

Perceived seriousness of a given health problem influences the performance of preventive behavior. "Perceived seriousness is judged either by the amount of emotional arousal created by the thought of the disease or by the difficulties that the individual believes a given health condition would create for him or her. These considerations could include physical, social and

psychological impacts (Pender, 1982). Most research reviewed by Becker support this statement. However, a few studies have failed to support such a relationship and Becker et al. (1977) pointed out perceived susceptibility and perceived seriousness combine to determine the total perceived threat of an illness to specific individuals.

Unique to each person is their perception of the world. Carl Rogers (1951) suggested many years ago that each person lives in the midst of his/her own phenomenal (experiential) world and responds to that world on the basis of how it is perceived and experienced. "Perceptions which a person has are influenced by a number of complex variables intrinsic to the objects themselves, the context in which the perception occurs, and, most significantly, the perceptual tendencies of the perceivers" (Muldary, 1983, p.7). The human ability to perceive facilitates the acquisition of information so that learning can occur. During initial encounters, visual, auditory, tactile and perhaps olfactory stimulations are received by the sense organs. This information is then translated by the brain into perceptions that are used in the learning process by the individual (Muldary, 1983).

The health belief model as interpreted by Becker (1974) predicts readiness and motivation to take health action. This model can be used when planning for prevention. In order for an individual to be motivated and take preventive

actions, the person must perceive him/herself susceptible to the disease in question. The disease must have serious consequences if contracted. There is a known treatment which will reduce the threat. The threat of the treatment is known to be not as great as that of the disease. Earlier research by Kanfer (1971) found self-sensitivity and self-awareness to be critical to competent self care. Self-awareness permits self-monitoring of psychologic and physiologic parameters which supports Becker's statements in the health beliefs model.

Therapeutic Communication

An understanding of the above principles of human behavior is necessary to plan appropriate teaching-learning strategies in health education. While multiple factors influence the teaching-learning process, this study focuses on the factor of one-on-one interactions. The method of communication employed during these interactions is critical and will be explored in this section.

The type of communication between nurse and client contributes heavily to the feeling of satisfaction that a client has about health care (Pool, 1980). Communication skills are necessary for health professionals to establish, maintain, and terminate effective helping relationships with patients (Edwards & Brilhart, 1981). Collins (1983) states that the quality of the interaction significantly

contributes to the outcome of health care, patient knowledge, and satisfaction with medical care.

Communication is a broad category that encompasses both verbal and non-verbal language. The professional helping relationship is a special relationship that is differentiated by a conscious attempt to help the individual. This helping relationship is often referred to as therapeutic. The caliber of the helping relationship depends on communication. Open, clear, sensitive communication nurtures the relationship. Therapeutic communication is defined as that exchange of information directed at helping the client (Sundeen et al.,1985). It is a highly conscious effort to use and to assist clients to use all appropriate behaviors possible to maintain or regain health. Therapeutic communication contains certain skills. The standard of positive head nods, gestures, 80% eye contact, and a forward body lean are considered effective affiliative behaviors that are therapeutic (La Crosse, 1975). Therapeutic communication includes the microskills of listening and attending and the basic skills for therapeutic influence including empathy, questioning, summarization, confrontation, interpretation, and reflection (Beck, Rawlings, & Williams, 1984). Some authors (Charny, 1966; Scheflen, 1973; Trout & Rosenfeld, 1980) proposed that mirrored positions accompany and reflect heightened rapport

between patient and therapist but this idea is not widely adopted by all nursing texts.

> There is not a core of functions that describes a person who is universally effective. Nurses as helpers, however, must be therapeutic in their care, since the goal of nursing is to facilitate the patient's positive adaptation as a unique individual to the stress s/he is experiencing. During the course of interactions with clients, nurses seek to establish a climate of trust, understanding, acceptance, and open communication. (Stuart & Sundeen, 1983, p.110)

Certain skills or qualities must be achieved by the nurse to initiate and continue a therapeutic relationship. They incorporate verbal and nonverbal behaviors and the attitudes and feelings behind the communication. Trust has been shown to be a key element in therapeutic relationships (Strupp, 1973). Gazda, Asbury, Balzar, Childers and Walters (1977) describe relationship building as being attained through the process of establishing rapport, acceptance, and trust. The development of trust may begin when a person gets

the sense that s/he is being understood, that s/he and the other person are "speaking the same language" (Lewis & Pucelik, 1982, p. 14). Developing trust facilitates rapport. Part of trust the client feels toward the nurse is based on the belief that the nurse is a competent professional. Trust is further built by the individual's ability to communicate genuine concern for the client. The approach to the patient must be personal to establish trust.

The elements of therapeutic relationships were explored by the pioneers Carkhoff and Truax. Texts written by Carkhoff (1969), who is the most commonly cited author in counseling literature, Carkhoff and Truax (1967) and Carkhoff and Berenson (1967) have identified specific core conditions for facilitative interpersonal relationships. Constructive change on the part of the individual is related to certain vital interpersonal qualities that a facilitative helper communicates and demonstrates. These include empathetic understanding, respect, genuineness, and concreteness. Empathetic understanding can be described as the ability to accurately perceive the client's feelings and their meaning. Gazda, Ashbury, Balzar, Childers and Walters (1971) included focusing verbal and nonverbal behavior by the helper, formulation of responses of empathy in a language and manner that is most easily understood by the helpee, and use of a tone of voice similar to the helpee by

the helper among the behaviors for responding with empathy. Respect is conveyed by attending to the client and by tone of voice and the manner in which the client is greeted and addressed throughout the interaction. Respect and positive regard are synonymous to Carkhoff (Carkhoff & Berenson, 1967). Genuineness is the quality of being real, of expressing true feelings in response to a client. Concreteness refers to the ability to talk in terms the client can understand and not in an abstract, vague or ambiguous manner.

Carkhoff contends that it is the relationship established with the client that is the primary determinant of facilitative effectiveness (Carkhoff & Berenson, 1967). Fiedler (1950) in the late 1940's conducted studies that suggested that the quality most characteristic of a good facilitator is her or his ability "to participate completely in the patient's communication" (p. 243). He identified therapeutic understanding of effective therapists to be a quality of the therapist's which results in the person's feeling that she or he is understood, often to a much greater extent than she or he actually is.

Many nurses believe that they already demonstrate these qualities when communicating with their patients. A number of studies, however, have reported that nurses are low in the qualities traditionally associated with therapeutic

effectiveness in counseling - genuineness, nonpossessive warmth, and empathy (Peitchinis, 1972). Research has demonstrated that nurses generally do not rate high on communication skills necessary for therapeutic effectiveness (Pluckhan, 1978; Friedrich, Lively & Schacht, 1985). Friedrich et al.(1985) reported results of Truax and Millis' unpublished study, (1971) that found nurses and factory supervisors score lowest among 13 occupations on empathy, warmth, and genuineness. However, studies of nursing students, medical students, and staff nurses have shown that training programs have been very effective in improving communication skills (Olson & Iwasiw, 1987; Anderson & Gerrard, 1984; Gerrard, 1982; La Monica, Carew, Winder, Hoase & Blanchard, 1976).

Client- health professional interactions affect the incidence and consistency of health-protecting behaviors. Specifically, the perceived interpersonal similarity between nurse and client facilitates the learning of preventive behaviors. Maiman, Green, Gibson and Mackenzie (1979) studied the impact of interpersonal similarity between nurse and client and positive written appeals on learning self-care measures to prevent the occurrence of asthmatic attacks and decrease emergency room visits. This study selected a nurse for the educational settings who was also an asthmatic and compared her impact on clients with that of nonasthmatic

emergency room nurses. Results of the study indicated that whether the nurse did or did not overtly identify that point of interpersonal similarity to the client, her interventions were more effective than those of other nurses in lowering emergency room use. This effect occurred irrespective of whether written appeals concerning control of asthmatic attacks were given to clients. Perceived similarity between client and nurse may have enhanced the effectiveness of educational sessions.

Other studies have demonstrated the impact of interaction with health professionals on health-related behavior and compliance with medical regimes has been the topic for a number studies. These findings on compliance cannot be generalized to this study but are listed to show the potential of interactions with health professionals on client behaviors. In studying compliance behavior, Becker, Drachman and Kirscht (1974) found that belief and trust in the physician facilitated mothers' compliance with a treatment regime for pharyngitis and otitis media in their child. Goulder (1960) noted that clients were less likely to comply with medical care regimens if little interaction took place between the client and care provider. The Stanford Three Community Study showed that behavioral change is affected by health information. The study consisted of a two-year health education campaign directed at changing

dietary behavior among the target populations to decrease the risk of cardiovascular disease. Mass media, and mass media as well as intense personal counseling was used for the treatment groups, a third community served as control. Analysis of the data on average dietary intake showed that the health education campaign had resulted in a 20- to 40-percent decrease in cholesterol, saturated fat, and polyunsaturated fat consumption among both men and women. Those men who had received intense personal instruction tended to out- perform men exposed to mass media alone, while women responded equally well to mass media and counseling approaches. Improvements were maintained over the two years of the study, indicating the potential of health education for significantly changing behavior (Stein, Farguhar, Maccoby & Russell, 1976). The use of therapeutic communication in teaching was compared in an experimental study of nurse teaching techniques (Felton & Huss, 1976). Patients receiving preoperative instructions were randomly assigned to three groups: formal instruction, routine preparation provided by nursing personnel, and the experimental group, therapeutic communication. Nurses used therapeutic communication to positively influence learners by creating an atmosphere where the clients could verbalize feelings. The use of therapeutic communication significantly reduced the preoperative to postoperative anxiety in the

subjects. These subjects also scored higher than the others on measures for psychological well-being.

The results of these studies support the thesis that perceived interpersonal similarity and the manner of communication used by the health professional have a positive impact on health preventive behaviors by clients. As stated in an older work by Carkhoff and Truax (1967): "The central ingredient of the psychotherapeutic process appears to be the therapist's ability to perceive and communicate, accurately and with sensitivity, the feelings of the patient and the meanings of those feelings"(p.285).

Several studies have examined the impact of non-verbal communication on the formation of therapeutic relationships. Tepper & Haase (1972) found that therapists who gave frequent non-verbal responses such as head nods, forward body lean, and eye contact were perceived as having greater empathy by their clients. Attending skills including posture, head nods, space and eye contact were found by Eagan (1977) to create a climate of support and trust. These same behaviors were found to increase client ratings of counselor expertise (Claiborn, 1979; Siegel, 1980). Early behavioral patterns are major determinants of impressions (Patterson, 1983). An extensive study of miles of videotaped nurse-patient interactions done by Daubenmire and Searles (1982) characterized verbal and nonverbal nurse

behaviors that they described as "convergence", these same findings were described as "empathy and rapport" by Davis (1984). Body posture and position, voice tone and quality are included in their analysis as critical elements for determining convergence. A study by Seay and Altekruse (1979) determined that eye contact was a predictor of ratings of genuineness. The frequency of eye contact appears to be viewed by the client as important when correlated with overall ratings of genuineness. Greater frequency of eye contact was found to be correlated with perceptions of truthfulness, less eye contact with being less truthful (Exline, Gray & Shuette, 1965).

Neurolinguistic Programming

Neurolinguistic programming (NLP) is a common sense approach to rapport that involves specific skills training in verbal and non-verbal communication. Neurolinguistic programming is a communication technique that was created by Richard Bandler and John Grinder (1975, 1976). The roots of NLP are found in the skills of master communicators such as Milton Erickson, Virginia Satir and Fritz Perls. Bandler and Grinder observed these experts and analyzed the skills they used to develop and form trusting relationships. Direct and indirect observations of these therapists' interactions with clients were analyzed and then combined into a theoretical

perspective that integrated the areas of psychotherapy and communication, linguistics, and neurological functioning into a model that described how understanding could be enhanced between individuals. NLP uses analysis of both a person's spoken language and the meaning being communicated plus clinical techniques for assisting clients (Bradley & Biedermann, 1985). For the purposes of this study, only rapport techniques will be examined and explored. NLP is concerned with the ways in which people process information but not necessarily with the specific content of that information.

Bandler and Grinder in The Structure of Magic, Vol. 2 (1976), identified three communication techniques that can be used in instructional technology. These are summarized as follows:

1. The right and left hemispheres of the brain are divided by function. Both hemispheres can be deliberately accessed linguistically, auditorily, visually, and kinesthetically.

2. Humans currently communicate well with some people. By increasing our ability to access all three representational systems we can communicate more effectively with more people.

3. Humans currently influence people in our lives, and by learning how people perceive and process information, we

can have greater control over that influence and therefore be more responsible for our actions.

NLP is concerned with the manner in which individuals receive and make sense out of information. Each person is said to have a primary representational system (PRS) that s/he best receives information for understanding. Practitioners of NLP take note of and then utilize the other person's representational system. This greatly enhances the establishment of rapport (Bandler and Grinder, 1976).

Bandler and Grinder (1976) identified certain behaviors associated with the person's representational system. They propose those with the visual primary representational system (PRS) best understand new information by associating it with a picture in their mind of what is being explained. Auditory PRS individuals learn through the use of the sounds associated with new and old information to store, remember and understand ideas. The kinesthetic PRS includes several important distinctions. These distinctions include: the exteroceptive sensations of temperature, touch, and pain; the proprioceptive sensations from deeper in our bodies keep us informed as to body position, vibrations, and deep pain; and emotions and feelings (Lewis & Pucelik, 1982).

Each person has a preferred PRS that s/he uses more than another. Persons who receive verbal information about a subject may not truly understand or recall the message if

they are primarily visual or kinesthetic in orientation (Bandler & Grinder, 1976). This is especially likely if the treatment is stressful, since people tend to regress to their primary mode under stress.

It is possible to identify the PRS by observing the individual's response to questions and identifying the language of the model the individual is using. When the therapist or teacher matches the language of the person's PRS, the individual is helped to receive the new information in the form that is easiest for them to understand. When an individual's PRS is matched by another, the individual is perceived as being alike, and trust and rapport are more easily established. Using the appropriate PRS system is proposed to enhance counselor-client understanding and rapport (Ellickson, 1983).

Rapport is further enhanced by mirroring the other's significant gestures and posture. Matching the other's tone of voice, tempo and breathing all assist in gaining the person's confidence and are effective rapport building techniques. As Grinder and Bandler (1981,p.14) stated,

> One thing I've noticed is that people are more apt to respond easily when they're in a state that hypnotists call rapport. Rapport seems to be built on matching behaviors. ...If you gage the tempo of your voice to the rate of their breathing, if you

> blink at the same rate they blink, if you nod at the same time they're nodding, if you rock at the same rate they're rocking, and if you say things which must in fact be the case, or things you notice are the case, you will build rapport.

Persons trained in NLP can model the structural elements of another's behavior. When modeling is occurring, the modeler replaces his own behaviors temporarily with those of the person being modeled. The physiology, language, and strategies of the person being modeled is imitated by the modeler. The process continues as the modeler incorporates these beliefs into his or her own beliefs and adjusts them slowly so that the modeler's beliefs are reproduced in a form that is accepted when presented to the person being modeled (Einspruch & Forman, 1985).

An example of the use of this technique is illustrated by King, Novik and Citrenbaum (1983, p. 26):

> A staff nurse had been trying to calm him (a patient who was in the ICU after suffering a heart attack) for some time, but he continued to insist in a highly agitated manner that he wanted to smoke. After arriving and getting a

summary, the nurse marched quickly into the room. She immediately began to speak in a loud, fast, and somewhat high-pitched and "agitated" voice. In the tone described and with the appropriate congruent body movement, such as exaggerated hand movements and moderately fast breathing, she proceeded to tell him, 'Of course you're upset. You've got severe pain. You're closed in here. You're wife's in the hospital, and on top of that they won't even let you relax a little by smoking one lousy cigarette. Boy, I'd be upset too. It's a wonder you've been able to tolerate it as long as you have.' Having his complete attention, she continued in this fashion for several minutes...Then she gradually began to slow down and soften her speech and breathe slower and move more smoothly....Within about seven minutes he was calm...At this point, he actually looked up at her and said, 'You know, for some reason I really think I can trust you...'

The major communication techniques used in NLP for rapport are eye patterns, predicates, and pacing and leading. Eye movements are cues to the lead system or

sensory modality preferred to access information. Observation of eye movements is only one cue to the person's lead representational system. Each person is assessed on an individual basis with validation of the findings made by follow-up questioning. Further, a person may use several representative systems when processing information before answering.

The second communication technique utilized is the identification and use of verbal predicates. The choice of verbal predicates can be used to identify the system that is in the person's conscious awareness at the time. "Predicate matching" is a technique used by NLP practitioners to "speak the client's language" (Bandler & Grinder, 1976, p.3). This technique involves (a)listening to the speaker, (b)identifying which of the five senses is being used in perceiving an experience by listening to the client's descriptive language and, (c)communicating with the speaker in the language of his/her sensory system. Matching predicates, according to Bandler and Grinder (1976) improves communication between individuals by enabling the speaker to sense that the listener truly understands and thus leads to greater trust.

The speaker selects predicates, usually unconsciously, to describe the portions of an experience to which an individual has attended most closely. Experiences are

represented in a different system from the analogue, lead system; the digital system of words, phrases, and sentences give clues to the individual's preferred sensory modality for making meaning of the world. Examples of visual predicates are "black, clear, spiral"; auditory predicates include "tinkling, silent, squeal, blast"; kinesthetic predicates include words such as "felt, held, damp, touch." In describing an experience, the individual chooses verbs, adverbs, and adjectives that identify her or his most highly valued representational system. A visual representation is "I see what you mean." An auditory one is "I hear what you are saying," and a kinesthetic one is "It feels right." It is important to note that some verbs are unspecified; "think" is <u>not</u> a representational system (Bandler & Grinder, 1979). "Think, be aware of, understand, believe, sense, know" are all unspecified, and therefore are not useful in therapeutic communication. The response to these unspecified words is random (Haynie,1981).

The third communication technique is called pacing and leading. Pacing is a combination of NLP strategies which are used to assist the client to understand and accept the information presented by the therapist. Pacing involves the subtle matching of voice volume, tone, tempo as well as mirroring of some aspects of another person in order to establish rapport. During the interview, the NLP

practitioner begins mirroring of non-verbals particularly body language and gestures simultaneously. If the person being interviewed uses a colloquial expression frequently, the interviewer incorporates that same phrase with identical intonation and expression into his or her own speech. Leading involves the use of the information gained during the pacing stage to ask questions using predicates from the person's PRS and observe the response. Validation is obtained for the success of the technique is obtained by the person's acceptance of a new idea proposed using pacing and leading. Pacing promotes listening and understanding (Ludwig & Menendez, 1985).

NLP, as a communication technique, can be skillfully used by trained practitioners to guide the other person involved in the interaction almost on the unconscious level, since the person is using their own most comfortable system for communication. The barriers of fear of the unknown and mistrust are quickly broken down as the individual realizes s/he is talking with someone who behaves, talks, and apparently thinks and believes just like themselves. Rapport is quickly established once the trust is gained. These same tools can be used to assist the individual to accept what is being said since it is presented in a manner as to be similar to the client's own thoughts.

NLP is a powerful tool and could be used by unethical persons to influence others unfairly. This was not the intent of Bandler & Grinder who propose it as a therapeutic tool for assisting clients to change for the better. Nurses are professionals bound by a code of ethics that prohibits them from taking advantage of the vulnerability of the client or abusing the rights of the therapeutic relationship. NLP used to enhance therapeutic relationships and to assist the client to better understand health teaching information, has the end result of being beneficial to the client.

On going assessments of the client's representative system are necessary if the information is to be correctly presented. The nurse has the responsibility to the client to continue these assessments so as to present the information so it can best be received by the client.

After the teaching, the client may benefit from learning that the information was presented according to the identified representative system. The client should also be informed that the representative systems change and that they may find another system in use the next time they are assessed.

Related Research Studies

The basis for NLP beliefs can be found in communication research. The spoken word carries two messages, the verbal message of words and the vocal message of emotion. Sometimes the information from the vocal cue is greater than the verbal message (Ellis & Whittington, 1983). This fact has led some researchers to conclude that, when given a choice between the spoken word and its vocal expression, perceivers will tend to rely on the vocal expression as the primary source of information for the actual meaning of the speaker's words. Various emotional cues can be identified from how the speaker uses vocal cues such as pitch, range, resonance and tempo. Personality traits are often inferred from vocal cues (Apple, Streeter & Krauss, 1979; Bellack, 1980; Knapp, 1980). Public speakers are taught to maximize the effect of vocal cues in order to ultimately influence others' perceptions of their personality. The inferences people make about vocal cues are based more on vocal stereotypes than on true relationships between vocal cues and personality (Tubbs & Moss, 1980; Knapp, 1984).

Pitch refers to the frequency level of the voice. Pitch level apparently has an effect on the perceiver's attitude toward the speaker (Tubbs & Moss, 1980; Trower,1983). Pitch accord can be used to pressure the listener in his/her

answering move to agree with or confirm what the speaker says (Brazil, Coulthard & Johns, 1980). Tone of voice refers to a whole range of utterances including key, grouping of speech and breath and tone groups, and intonation- the pattern of pitch and stress within the tone group. The listener's analysis of the tone of voice, especially the intonation, reveals the speaker's attitude (Milroy & McTear, 1983). Both monotones and exaggerated pitch changes are disliked by most individuals (Eakins, 1969).

The tempo of speech relates to the rate of production of words. Emotions such as anger or fear are related to a fast speech tempo while a slow tempo is associated with sadness or depression (Barnlund, 1968). Rapid speech has also been associated with increased cardiovascular response as evidenced by increase in blood pressure (Lynch et al., 1980).

Mehrabian (1971) described the results of studies which suggested that the actual words spoken account for a very small impact on others when assessing feeling. A study by Liehr (1987) also showed various meanings are attached to any specific variable. Vocal cues seem to influence more than one-third of the impact, and facial expressions, influence more than one-half of the impact of others (Buss, 1986). Appropriate body movements, affective behaviors, gaze, gesturing and smiling have been found to contribute to

socially skilled performance (Conger & Farrell, 1981; Peterson, Fischetti, Curran & Arland, 1981).

Studies have shown that persons are attracted to persons on the basis of similarity. The results of Byrne's (1969; 1971) studies showed persons are attracted to and like people whose attitudes, interests, and values appear to agree with ours. This holds true for initial interactions; future interactions may change the initially held perceptions of similarity. The importance of perceived similarity has been debated. Research by Novak and Lerner (1968) showed individuals were more willing to interact with similar than dissimilar others. In the study done by Trout and Rosenfeld (1980) an attempt was made to experimentally test observation that mirrored positions accompany and reflect heightened rapport between patient and therapist. They found postural lean toward and mirrored postures correlated significantly with an impression of what they characterize as "rapport". Dabbs (1969) showed that perceived similarity interacted with intentional imitation, producing liking. Postural mirroring was found to facilitate interactions without being noticed. In reviewing the body of literature on postural mirroring and rapport, LaFrance (1982) concluded that postural mirroring was basic to interactional rhythm. Postural mirroring occurs naturally in group interactions. When intentional mirroring is done, it

facilitates the beginning interaction exchange. She concluded that at microlevels communication is facilitated by the continual, shared, rhythmic mirroring of posture during interactions.

Several educators have addressed the question of techniques for teaching that would cooperate with the student's most highly valued input channel (Dunn & Dunn, 1978, Laosa, 1977; Raskin & Baker, 1975). Joseph E. Hill (1973) was a pioneer in assessing the mode of behavior an individual uses when searching for meaning. He reported the individual's ability to process information through sensory channels. He found the most important sensory channels are the visual, auditory and kinesthetic. Most adults are able to function in all three modalities because of cognitive maturity. When under stress an adult will usually resort to a dominant modality. Identification and use of the learner's dominant modality during teaching should be beneficial to the learner (Van Hoosier, et al. 1987). An exploratory study done by Jonassen (1981) found that teachers also have preferences and tend to teach according to their own personal styles, cognitive styles, learning preferences and modality strengths. The learner may not have the same preferences and thus learning may not be effective. Assessing the individual's learning style, modality strength, cognitive styles, and learning preferences can be

useful guides to teaching actions (Van Hoosier et al., 1987).

Confirming and Non-Confirming Research Studies

Several research studies have been done about NLP. Some confirm and some do not confirm the claims made by Bandler and Grinder about NLP. Mirroring has proven to be successful, according to Ludwig and Menendez (1985, p.45), because the modeler subtly conveys to the person a sense of trustworthiness and shares the concern of the individual with whom the conversation is taking place. Mirroring also serves to minimize distracting differences. By assuming the posture and an emotional tone similar to that of the person s/he is assisting, the NLP practitioner communicates empathy and attentiveness.

Researchers have had difficulty validating the reliability of claims of Bandler and Grinder about PRS. The reliability of the eye-movement technique has been seriously questioned (Dorn, Atwater, Jereb & Russel, 1983; Sharpley, 1984). The technique's validity has been questioned (Gumm, Walker & Day, 1982; Thomason, Arbuckle & Cady, 1980). Data from Beale (1980/1981), Hernandez (1981), and Thomason, et al. (1980) failed to verify that eye movements are better than chance.

Multiple studies have implemented predicate matching as suggested by Bandler and Grinder but the best method for identifying the client's PRS has yet to be established. Verbalizations were used both prior to the interview and during the interview. Paxton (1980/1981) used verbalization prior to the interview and did not find support for predicate matching. The tracking of client predicates and varying the modality of the responses during the interview has been done (Dowd & Hingst, 1983; Dowd & Petty, 1982; Frieden, 1981; Hammer, 1983) with only partial support found by Hammer (1983) on client ratings of counselor empathy. A few studies have investigated the hypothesis that predicate matching leads to increased trust (Dowd & Hingst, 1983; Dowd & Pety, 1982; Falzett, 1981), but only Falzett reported positive results. Falzett (1981) had counselors match or mismatch predicates with 24 right-handed female volunteer college students whose PRS had been determined by eye-movement responses to questions prior to predicate matching. Subjects rated the counselor on trustworthiness with results indicating a significantly higher level of perceived trustworthiness when counselors matched predicates with clients ($p<.001$). Critics of this study dispute the findings as eye-movements were the only basis for identifying the PRS.

Frieden (1981) used predicate matching during actual client interviews with two college students who were seeking help for "personal problems". Although he reported no increase in ratings of counselor trustworthiness, both clients reported decrease in target symptoms. Frieden concluded his study provided "no unequivocal support" for NLP (p.85) due to marked individual responses. His study was positively reviewed by Sharpley (1983) for his choice of ongoing predicate matching procedures rather than prior detection of the PRS. This was seen as "a significant step toward isolating the effectiveness of predicate matching from the issue of accurate identification of the PRS prior to the interview"(p.244).

Dowd and Petty (1982) used audiotapes of counselors speaking in matched or mismatched predicates with a client discussing a friendship problem. These tapes were played to volunteer students who then rated the counselor on satisfaction and willingness to see the counselor. No support for matching the PRS was shown by the results.

Counselor matching, mismatching and nonmatching of volunteer student "clients" during laboratory interviews was used by Dowd and Hingst (1983). The subjects who had actually experienced the predicate matching, mismatching, or nonmatching rated the counselor immediately after the

interview with no significant differences due to treatment noted.

Yapko (1981) used the client's preferred representative system to induce hypnotic trance in his study and found the electrical activity of the brain as measured by EMG readings was lowest when the client's preferred representational system was used in the audiotape of relaxation instructions.

Sharpley (1984) cited the limited range of dependent measures as a major deficit in studies attempting to show the effectiveness of the NLP technique of predicate matching so far. He suggests the need for further controlled studies using reliable indicators of change in client's behavior.

Identification and use of predicates is but one part of the rapport skills proposed by Bandler and Grinder to increase client trust. The researchers have used only one part of the technique. The studies have only been conducted in a controlled laboratory situation. Their findings need to be treated with caution. The real test of the usefulness of the techniques should be determined by their practical application with actual clients.

Applications of NLP

A review of the literature reveals application of NLP to counseling, business and sales, special education and others. The majority of doctoral dissertations reviewed related to counseling. They employed the chosen treatment of

predicate matching. Higher level skills such as "anchoring" have been studied and applied to spelling (Klein, 1985), math anxiety treatments (Thalgott, 1986) and individual learning styles (McCabe, 1985).

Recent interest in NLP and human resource development (HRD) resulted in the American Society of Training and Development's (ASTD) creation of a Neurolinguistics Network in 1981. As of January,1986, there were over 500 official members of the network worldwide. ASTD's bibliography lists a variety of resources for NLP including videotapes on phobia cures, changing beliefs, future pacing for remembering later and swish patterns, all demonstrated by recognized NLP experts Connirae and Steve Andreas. Other subjects including math skills, writing skills, typing, spelling, sales training, and persuasion techniques training can be taught using NLP (American Society for Training and Development, 1986).

The founders of NLP, John Grinder and Richard Bandler, themselves continue to offer training programs and market videotapes. In Human Excellence, John Grinder demonstrates "how to elicit, anchor and utilize accelerated learning states through metaphor, exercises, and tasking" (American Society for Training and Development, 1986, p.80). Richard Bandler markets Magic in Action, where he demonstrates

"techniques of behavior change" (American Society for Training and Development, 1986, p.73).

Applications to nursing in particular are few. Dilts (1983) devotes a chapter in his book to NLP and health care. Nursing literature contains only two short articles (Knowles, 1983; Brockopp, 1983) on NLP but selected NLP techniques are beginning to appear in selected psychiatric nursing texts (Beck, C.M., Rawlings, R.P., & Williams, S.R.(Eds.), 1984). King, Novik, and Citrenbaum (1983) use NLP techniques in their book Irresistible Communication: Creative Skills for the Health Professional. A short explanation of the technique is given at the Senior level of the University of Maryland School of Nursing in Baltimore County but without the necessary detail to be able to perform the techniques.

Conclusions

Nurses are trained in therapeutic communication to assist them in forming a helping relationships with their clients. One role for the nurse is that of teacher. There is a lack of educational preparation for this teaching task. During one-on-one client teaching interactions, communication skills are necessary to gain client trust in order for the nurse to begin to teach.

Neurolinguistic programming is a communication technique that utilizes specific verbal and nonverbal

behaviors that are proposed to gain rapport and increase client trust. Once rapport is established, the client is more receptive to hearing and accepting what is then presented. Claims made by Bandler and Grinder about the NLP model are similar to known research about communication. The techniques have been used with limited success in previous studies.

This study proposes to apply the use of NLP rapport skills to nurse-client teaching interactions when discussing sexually transmitted disease information, specifically AIDS prevention. This is one area where skillful communication by the nurse is necessary in order to assist the client feel at ease and less embarrassed. Practical application of the techniques in a clinical situation was one recommendation made by critical reviewers of previous studies.

CHAPTER III

Methodology

Introduction

The purpose of this study was to investigate the effects of NLP rapport skills on client satisfaction with nurse teachers and retention of knowledge following one-on-one teaching interactions of AIDS prevention information. This chapter presents the research design, teacher training, selection of subjects, testing instruments, and data collection and analysis procedures.

Research Design

A quasi-experimental pre-test-post-test design using a variation of nonequivalent control groups was used for the study. The design is shown in Figure 1. The pre-test-post-test control group design controls for most threats to internal validity--selection, instrumentation, statistical regression, and mortality.

The design is similar to the nonequivalent control group design which has two groups that are compared on observation before and after exposure of one group to the treatment. This design is similar to the pretest-posttest control group design, except that subjects in the nonequivalent control group design are not randomly assigned from a common population to the experimental and control groups. According to Huck, Cormier and Bounds (1974,p.302)

this design is appropriate for research conducted in natural or field settings. The study involved two separate groups. The independent variable was the use of NLP by the nurse, the dependent variables were client satisfaction and knowledge of AIDS prevention information. The subjects were nested with the randomly assigned nurse teachers who taught using either the treatment or the control curriculum according to how they were trained.

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O O

FIGURE 1

NONEQUIVALENT CONTROL GROUP DESIGN

Transmitters of Design

Thirty RN's who were enrolled at a large eastern state university "RN to BSN" program initially volunteered to participate in the research. Once the actual process and time of training was explained, the number of RN's willing to undergo the training dropped to sixteen. The project was advertised as a chance to participate in an instructor's doctoral dissertation research. The purpose of the study was to compare different methods for teaching AIDS prevention to the public. The students were told that they could use the time involved with the study as part of their clinical time. A written description of their activities was given to their individual instructors so they could receive the clinical credit. Criteria for selection included availability and willingness to participate in the study. Demographic information obtained from all the nurses who volunteered (Appendix L).

The research volunteers were told they would be randomly assigned to different groups. It was emphasized that regardless of the group all nurses could receive training in the other method once the data had been collected. Informed consent was obtained (See Appendix J & K). A copy of the consent form was given to all nurse participants. All nurses were told they could withdraw from the study at any time. Participation was voluntary.

AIDS Prevention Teacher Training

Both groups of nurse-teachers were taught how to teach AIDS prevention using an established curriculum that is available from an American publisher (Quackenbush & Sargent, 1986). The training in AIDS prevention education was provided to all the volunteer nurses during one two hour session conducted by a nationally recognized AIDS prevention expert. The objectives of the curriculum were to increase the knowledge of AIDS including what the disease is, how it is contacted and spread and how to prevent infection. Specific content included: (a)definition and explanation of AIDS, (b) who gets AIDS, (c) why people get AIDS, (d) what it is like to have AIDS, (e) what is ARC, (f) the length of incubation for AIDS, and (g) the basic guidelines for AIDS prevention including a list of safe and unsafe sexual activities. The AIDS educator reviewed the content and answered questions the students had about presenting the information. Potential problems and solutions were also discussed. The content was written in simple language and could easily be learned and explained to clients (script Appendix G).

Once this training was completed, the nurses were randomly assigned to be the teachers of clients for either the treatment or the control group. The nurses were paired by years of experience in nursing. One member of each pair

was randomly selected by coin toss and assigned to be trained to teach the treatment group, the other member was assigned to teach the control group.

Training for the Nurse Teachers of the Treatment Group

NLP rapport skills were taught to the eight RN's who had been randomly assigned to learn the treatment. The training took place during approximately seven hours of training provided over two nonconsecutive days to allow for skill practice. The curriculum was developed with assistance from Dr. Wyatt Woodsmall, master trainer in NLP using some of his own techniques, some from Richard Bandler and John Grinder, others from course work taught by R. Klein. The training employed interview sessions where the nurses learned to establish rapport, identify the primary representational system based on predicate identification and then to pace and lead the client using their identified predicates to teach the AIDS prevention content. These areas are considered critical by the creators of NLP, Richard Bandler and John Grinder, to create rapport so that a therapeutic or helping relationship can begin. All exercises were interactive and allowed for a progression of skills from simple to complex.

The goal of the training was to introduce NLP techniques as useful strategies that could be employed by nurses to gain rapport and teach clients AIDS prevention

information. Objectives for the training were that the successful participant would:

1.Develop NLP rapport skills techniques through participation in interactive exercises.

2. Demonstrate ability to match and mirror during informal interviewing sessions.

3. Determine a client's primary representational system by spoken predicate use.

4. Use the client's PRS, plus matching and mirroring, to pace and lead when presenting AIDS prevention information.

Training

Each training day lasted from three hours and thirty minutes to four hours. There were six parts to the instruction on day one. The introduction first welcomed participants and briefly explained the purpose (5 minutes). Participants met each other during the first activity of day one. The participants learned to match and mirror the posture of their partners while interviewing and observed the relaxation response. Skill building progressed to include matching and mirroring of posture, using the partners significant gestures and verbal markings when responding (30-45 minutes). NLP and rapport was explained (15 minutes).

The concept of primary representational systems was introduced in a lecture-discussion format (15 minutes) that progressed to practice listening exercises where participants talked about a recent pleasant experience and members sought to identify and classify the choice of predicate used (30 minutes). Group members gained skill at using the three main representational system predicates-visual, auditory, and kinesthetic - by constructing a story using the identified PRS and then switching to a different PRS (30-45 minutes). Adequate practice time allowed for each participant to begin using predicates other than their own preferred system.

The last activity of the day incorporated all instruction of the day and added the concepts of pacing and leading. Again using an interview format, all the skills of matching, mirroring, predicate identification and pacing with predicates were practiced. First, the PRS of the partner was established by listening to the choice of predicates and rapport gained through the matching and mirroring of verbal and nonverbal communication. Next, the interviewer began to pace and lead the partner by applying the information gained during the interview to present a new subject to check for validation of the information. Validation was obtained by the subject adjusting his/her position in response to a similar change by the interviewer

or by calibrated verbal and/or nonverbal agreement with statements made by the interviewer in their PRS (30-45 minutes).

The predicate information was reinforced with written handouts. Homework practice in predicate identification, matching and mirroring was assigned. Homework practice was done with any other adult encountered after the training where a verbal exchange occurred. The importance of practice was stressed (15 minutes).

Day two of training also lasted from three hours and thirty minutes to four hours. There were six parts to the instruction on day two. At the beginning of the second day, all the topics covered on the first day were reviewed these include: matching and mirroring of posture and significant gestures when responding, the elements of rapport, identifying and using client's predicates to pace and lead. Participants were asked about the success of the homework and any problems encountered. Most participants stated that they had some difficulty filling out the correct answers for the sheets; these were reviewed with the entire group. The assignment to listen for and identify predicates and matching and mirroring of their partners during conversations had been successful for the participants. The response of the partner was favorable and no participant experienced a negative reaction. One participant had used

the skills to teaching a diabetic client who had previously been non-compliant. This nurse stated the client remarked at the end of the instruction that he felt the nurse was "someone he could really talk to". She was very surprised. Another nurse stated that she had not noticed before how her husband and she mirrored their non-verbal gestures. As a test, she did not mirror the significant gesture and the husband was noted to get up and leave. The next time, she mirrored his significant gesture and a relaxed after dinner conversation ensued (15 minutes). Facility with all the PRS was required in order to feel comfortable interviewing and pacing and leading participants with PRS other than the participants own. This was noted to be one area that still required practice. All nurses at this point were aware of their own preferred system and which system they were most uncomfortable using. Time was allowed for the nurses to practice identifying a variety of visual, auditory, and kinesthetic predicates in the form of verbs, adjectives, and adverbs (25 minutes). Other clues for identifying the clients PRS were distributed and reviewed using a handout (10 minutes).

To assist in the identification of the client's lead representational system, a short segment on eye accessing cues was introduced. A university staff volunteer was recruited from outside the classroom to answer questions as

part of a training exercise. Using prepared questions that pertain to visual, auditory, and kinesthetic responses, the participants observed the directional movements of the person's eyes as they thought about and answered the questions. The individuality of responses was stressed (15 minutes). Since each person has a unique pattern and each person must be individually calibrated, this information was presented through demonstration and a handout was provided. Students could see the identified patterns used by the subjects or by asking the subject questions to elicit a response which would tell the observer which eye movements correspond to which PRS for their client. This information was taught as a further assessment tool. The identification of the eye accessing pattern of the client was not required for mastery of the NLP rapport skills.

Final practice of all the skills was provided as the group switched partners and interviewed each other as well as volunteers. A final exercise, called sculpting, where observers correct the verbal and nonverbal communication of the nurse to match that of the subject as closely as possible, was videotaped and reviewed with the participants (60 minutes).

Appropriate strategies for using the client's representative system were reviewed and other similar strategies were discussed. The nurses were given teaching

plans re-written with the appropriate predicates included for persons who used visual, auditory, or kinesthetic predicates (Appendix M). Specific techniques for presenting the AIDS prevention information to someone with a visual PRS included drawing pictures, pointing to illustrations, and encouraging visualization. Strategies for the auditory PRS client included encouraging the client to repeat key facts and general encouragement of discussion and asking questions. Persons with a kinesthetic PRS were encouraged to disclose feelings and to write key words to assist them to remember the information. The teaching plan was written in language for each of the representative systems and contained the general information about AIDS and the prevention guidelines advocated by the surgeon general as necessary knowledge. The general teaching plan was based on this information.

All materials and the format for conducting the individual teaching for the study were reviewed and practiced. The format included giving an explanation of the study using the script (Appendix A), the obtaining of the demographic information (Appendix C), assigning the number code, assuring the client of confidentiality, reviewing and signing of the consent form (Appendix B) and providing the client with a copy, the pre-test procedure (Appendix D), interview to identify the client's PRS, the actual teaching

interaction including the review of the pre-test utilizing strategies and language for the client's PRS (Appendix M) and finally administration of the satisfaction instrument (Appendix E) and post-test (Appendix F). Questions were answered and all forms and teaching materials were distributed.

During a final videotaped interview with a volunteer client, the nurses demonstrated their mastery of the rapport skills. While matching and mirroring, they used questions to elicit sensory based responses and determined the volunteer client's PRS by listening to spoken predicates. Pacing and leading was done at the end of the interview when the client's PRS was used to introduce the AIDS prevention information (10-20 minutes).

Transportability

Two additional nurse volunteers were trained in the NLP rapport skills by this researcher. These nurse educators demonstrated their achievement of proficiency using the skills during a videotaped interview which they conducted with a volunteer client. This videotape was rated by the two nurse judges as demonstrating passing behaviors. The judges were two masters prepared nurse educators who are also certified practitioners of NLP.

To show the transportability, these two nurses each trained two other nurses using the NLP curriculum developed

by this researcher and used to train the nurse teachers for the study. Once the training and skill practice had been completed using the same two non-consecutive day schedule and format, their volunteer nurses also conducted a demonstration interview with a volunteer client that was rated by the NLP judges as demonstrating passing mastery of the skills. This demonstrates that the skills can be taught to RN's by other nurse educators successfully.

Training of Nurse Teachers for the Control Group

The nurses who taught the control group met with this researcher for approximately seven hours of discussion of adult education and the ethical issues of AIDS and its prevention. This was presented on two non-consecutive days.

General information about AIDS and the prevention guidelines advocated by the surgeon general as necessary knowledge for all adults was reviewed. The general teaching plan was based on this information. The pre-test and post-test was used for the study was adapted from Quackenbush and Sargent (1986) and was constructed on this knowledge of the basic information about AIDS. All materials and the format for conducting the individual teaching for the study were reviewed and practiced. The format included giving an explanation of the study using the script (Appendix A), the obtaining of the demographic information (Appendix C), assigning the number code, assuring the client of

confidentiality, reviewing and signing of the consent form (Appendix B) and providing the client with a copy, the pre-test procedure, the actual teaching interaction including the review of the pre-test (Appendix D) and finally administration of the satisfaction instrument (Appendix E) and post-test (Appendix F). Questions were answered and all forms and teaching materials were distributed.

Analysis of Nurse Teachers

One nurse, the only male to participate, dropped out of the study after the training had been completed and over half of the data had been collected. This nurse had been randomly assigned to the control group. Another nurse who had graduated with this nurse and had the same amount of work experience and was also part of the control group had been asked to teach an additional eight clients. So that the study could be completed without decreasing the number of subjects and a balanced cell size could be maintained, this nurse taught the additional clients and these eight clients were substituted for the eight clients that would have been taught by the nurse who dropped out of the study.

One of the treatment nurses was only able to recruit seven volunteers. Another treatment nurse with the same years of experience taught nine clients, one of her clients was randomly added to the clients for the treatment nurse

who had only taught seven to provide for statistical balance.

Subjects

A power analysis (Cohen, 1969) revealed that a minimum of 66 subjects was needed to achieve a power of .80 for the treatment effect, postulating medium effect size. To allow for attrition and mechanical problems, a minimum of 77 client volunteers were recruited.

Using two cultural groups increases the generalizability of NLP and had been one criticism of research in the field undertaken so far (Sharpley, 1984). Both black and white clients volunteered to be participants. Only clients who had English as their native language were accepted into the treatment group to avoid problems with a questionable link between representational systems and perceptual predicates when English is a second language (Hammer, 1984).

The subjects for the study were drawn from a population of students, faculty and staff at a large eastern university and clients of the registered nurse baccalaureate students of this same institution during a three month period during 1987-1988. The sample was a convenience group of subjects who were interested in learning AIDS prevention information and were willing to participate in the study.

Protection of Human Rights

A script introduced the purpose of the study (see Appendix A). It was made clear that subjects were free to participate or withdraw at any time. The participants were informed that their responses would remain confidential. A number code was used to identify the treatment and control group nurses and clients. The signed consent form indicated their agreement to participate.

Permission to seek participants from the local campus and approval of human rights was obtained through the Human Rights Protocol Committee at Virginia Tech and the Research Protocol Committee at the local university.

Procedure

Subjects in both the treatment and control group signed an informed consent form (see Appendix B) and were given a copy and completed a standard demographic interview questionnaire (see Appendix C). The demographic information obtained from the subjects was compared after the experiment was completed to determine similarities and differences between and among groups. Factors such as age, sex, race, and educational level was compared for similarities and differences. The results of these analyses are found in chapter four.

Objectives relating to the aims of the teaching and estimates for the total time for the instruction were

included in the introduction. The actual teaching interaction lasted fifteen to thirty minutes depending on the number of questions asked. A pre-test of knowledge of AIDS was administered prior to instruction for both groups to assess the increase in knowledge from a baseline (see Appendix D). Both the treatment and control groups completed a satisfaction questionnaire (see Appendix E) immediately following the instructional session. The instrument for client satisfaction with the nurse contained questions which relate to the impression the client has of the nurse's knowledge expertise, ability to teach, trustworthiness, and whether their fear of AIDS has been reduced. Questions were chosen to gain information about the variable which may have had an impact on the response. The tool was originally developed by Risser (1975) to measure patient satisfaction with nurses and nursing care in primary health care settings. The scale originally contained three areas: (a) technical-professional, relating to the technical activities and knowledge base required to competently perform nursing tasks. (b) trusting relationship, those nursing characteristics that allow for a comfortable and therapeutic trusting nurse-patient interaction; and (c) educational relationship, demonstrating the nurses ability to communicate clearly and provide appropriate information. The technical-professional area was omitted because hands on

care was not provided. The scale was shown to have internal consistency, reliability and validity during development and the findings were replicated by Hinshaw and Atwood (1982).

Once that instrument was completed, an objective test on the content taught was given (see Appendix F). The AIDS information pretest and posttest were part of the standardized curriculum (see Appendix G).

The same essential content was provided for both groups. The instructional presentation method varied according to whether the subject was taught by a nurse trained in the treatment or one from the control group. The length of time for the instruction varied according to the number of question and amount of corrected answers that had to be provided.

Volunteer subjects in the treatment group were taught by the nurses trained in NLP who used the NLP techniques of matching, mirroring, pacing, and leading during the initial interview to gain rapport and then taught the AIDS prevention information using the standard curriculum adapted to their PRS. Specific adjustments included the addition of the appropriate PRS predicate verbs, adjectives and adverbs to the AIDS prevention script. The clients choice of predicates was used when answering questions or discussing the content. Posture and significant gestures were matched and mirrored throughout the entire interview and teaching

interaction. Teaching techniques will varied according to the client's identified PRS. Those clients with a visual PRS had added emphasis placed on visual aids including graphs, picture, and pamphlets. Clients with an auditory PRS had information emphasized with spoken words and verbal explanations of the graphs and pictured information. Persons with a kinesthetic PRS were encouraged to take notes or draw out the graphs and otherwise involve the sense of touch in receiving the information.

Additional visual aids for visual clients were provided and they were encouraged using clues to assist them to make mental pictures during the presentation. Auditory clients were asked additional questions in order to get them to repeat information; their own comments and questions were encouraged by the nurse teacher. Kinesthetic clients were encouraged to participate through writing key words during the presentation and teaching for this group included a discussion of their feelings about AIDS.

The subjects in the control group received the AIDS prevention instruction from nurses who did not have the additional training in NLP rapport skills. They presented the information using the basic teaching plan as written and answered questions.

A smaller random sample of the participants received a follow-up post-test approximately one month following the

instruction to test for knowledge retention and a short interview was conducted to reassess attitude toward the nurse over time.

Future Application Measurement

Nurses who participated in the NLP training and taught the AIDS prevention information using NLP were asked by the researcher to evaluate the usefulness and future application of NLP to their own practice settings (see interview outline Appendix H). The questions were selected to determine the practicality of the techniques and to provide answers for the research question. The use of open-ended question allowed for discussion of the topic by the participants. This took place in an interview session after all clients had been taught. A follow-up of the implementation of NLP by these nurses in their practices would be a subject for future research.

Data Analysis

Data was analyzed using both quantitative and qualitative methods. Different methods were used to determine the answer to each research question. Data to determine if the NLP rapport skills could be successfully taught to nurses included videotapes of the nurses using the NLP rapport skills when interviewing volunteer clients. Validation of the ability of the nurses to use the NLP rapport skills was determined by two masters prepared nurse

educators who are certified in NLP. These judges rated videotapes showing the nurse using the skills when interviewing a volunteer (Appendix I).

The second research question was to determine if there was a difference in the knowledge retention of clients taught AIDS prevention by nurses using NLP rapport skills when compared with clients using traditional teaching methods. The clients' pre-test and post-test answers were statistically analyzed using analysis of covariance where pre-test score and education level were covariants used to determine group differences in post-test scores. A repeat post-test was administered to a randomly selected small number of clients to show their retention of the information over time.

The answer to the third question was provided by comparisons of the group responses to the satisfaction questionnaire. The clients answers to the questions were analyzed to determine their satisfaction with the nurse teacher. Results of these analyses were used to determine if there was a difference in the satisfaction of the client with the nurse who taught using NLP rapport skills. Additional information (see Appendix N) was obtained from randomly selected clients about their opinion of the nurse teacher approximately one month following the initial teaching interaction. These clients were interviewed by

telephone. They were asked their opinion of the nurse teacher and to say whether their opinion of the nurse had changed since the initial interaction.

Focus groups with the nurses who had been trained in the NLP rapport skills were held to answer to the final two research questions: whether the nurses felt the NLP rapport skills were useful to their own nursing practices and whether they planned to use them in their practices. They informally discussed their opinion of NLP rapport skills, the training and its benefits to their own practices.
The sessions were either recorded on audiotapes or field notes were written. The comments were then categorized according to the question and whether positive or negative. Specific comments were used to illustrate the responses.

CHAPTER IV

Results

Introduction

The purpose of this study was to determine if use of NLP rapport skills was a beneficial adjunct to current client teaching methods and other areas of nursing. Specific questions that were examined by the study included: (a) Could NLP rapport skills be successfully taught to nurses? (b) Was there a difference in the knowledge retention of clients taught information on AIDS prevention by nurses using NLP rapport skills when compared with a control group of clients using traditional teaching methods? (c) Did the use of NLP rapport skills increase the client's satisfaction with the nurse? (d) Did nurses identify NLP rapport skills as useful to their own nursing practices? (e) Did nurses plan to continue to use the NLP rapport skills in their nursing practices?

Research Question One: Teaching NLP Rapport Skills to Nurses

A major concern of the study was to determine if NLP rapport skills could be taught to RNs using a two day training format. The seven hour training format proved successful according to the ratings given by the judges for the nurses trained in NLP rapport skills. Table 1 shows the passing behaviors.

TABLE 1

NLP RAPPORT SKILLS RATINGS FOR TREATMENT NURSE TEACHERS

Passing = Ratings of 3 or 4 Failing = Ratings of 2 or 1

Behavior: Matches subject's body posture.

Nurse	Judge 1	Judge 2	Match
1	pass	pass	agree
2	pass	pass	agree
3	pass	pass	agree
4	pass	pass	agree
5	pass	pass	agree
6	pass	pass	agree
7	pass	pass	agree
8	pass	pass	agree

Behavior: Uses questions to elicit PRS.

Nurse	Judge 1	Judge 2	Match
1	pass	pass	agree
2	pass	pass	agree
3	pass	pass	agree
4	pass	pass	agree
5	pass	pass	agree
6	pass	pass	agree
7	pass	pass	agree
8	pass	pass	agree

Behavior: Mirrors subject's significant gestures when verbally responding.

Nurse	Judge 1	Judge 2	Match
1	pass	pass	agree
2	pass	pass	agree
3	pass	pass	agree
4	pass	pass	agree
5	pass	pass	agree
6	pass	pass	agree
7	pass	pass	agree
8	pass	pass	agree

Behavior: Matches subject's voice volume when verbally responding.

Nurse	Judge 1	Judge 2	Match
1	pass	pass	agree
2	pass	pass	agree
3	pass	pass	agree
4	pass	pass	agree
5	pass	pass	agree
6	pass	pass	agree
7	pass	pass	agree
8	pass	pass	agree

Behavior: When verbally responding matches subject's voice tone.

Nurse	Judge 1	Judge 2	Match
1	pass	pass	agree
2	pass	pass	agree
3	pass	pass	agree
4	pass	pass	agree
5	pass	pass	agree
6	pass	pass	agree
7	pass	pass	agree
8	pass	pass	agree

Behavior: When verbally responding matches subject's voice tempo.

Nurse	Judge 1	Judge 2	Match
1	pass	pass	agree
2	pass	pass	agree
3	pass	pass	agree
4	pass	pass	agree
5	pass	pass	agree
6	pass	pass	agree
7	pass	pass	agree
8	pass	pass	agree

Behavior: In conversation matches subject's predicates.

Nurse	Judge 1	Judge 2	Match
1	pass	pass	agree
2	pass	pass	agree
3	pass	pass	agree
4	pass	pass	agree
5	pass	pass	agree
6	pass	pass	agree
7	pass	pass	agree
8	pass	pass	agree

Behavior: At end of interview paces using predicate matching.

Nurse	Judge 1	Judge 2	Match
1	pass	pass	agree
2	pass	pass	agree
3	pass	pass	agree
4	pass	pass	agree
5	pass	pass	agree
6	pass	pass	agree
7	pass	pass	agree
8	pass	pass	agree

Two raters were used to reduce bias. This researcher was one of the raters. The raters of the videotapes were RNs, nurse educators who have a masters degree, and are certified in NLP. Judges of NLP received supplementary training for rating the NLP performance by the nurses. Following the recommendations of Cronbach (1970), the training included the following: (a) an explanation of the aims and purposes of the ratings with questions answered, (b) common judgement errors discussed, such as halo effect, (c) importance of maximal differentiation and avoidance of both leniency and central tendency errors, (d) ratings clarified and illustrated, and (e) supervised practice in assigning the ratings.

The judges were trained in practice sessions where videotaped sessions were rated and reviewed together so that mutual understanding of the scale and when the behaviors were or were not demonstrated was achieved prior to the actual study. The use of videotapes allowed the rater to view the whole interaction as recorded and to use just the audio or visual portion. The audio portion was used to rate the voice tone, tempo and volume match and determine if questions to elicit the client's PRS were employed as well as to listen for the spoken predicates to judge the nurse's ability to pace and lead appropriately by the end of the interview. The visual portion was used to observe matching

and mirroring of posture and gestures. If behaviors were not demonstrated, this was also recorded.

All eight nurses assigned to learn NLP to use when teaching AIDS prevention were able to demonstrate satisfactory skills performance on a videotape that was rated by two masters prepared nurse educators who were certified in NLP. The nurses admitted to being very nervous when being videotaped and even though practice sessions were taped and reviewed, the anxiety did not decrease. All nurses remarked that they had never been videotaped before. During the final evaluation of the training, the nurses mentioned the videotaping as being the one of the most helpful parts of the training. Seeing themselves perform the skill, even while nervous, made them more comfortable with their abilities.

This researcher directly observed and validated the actual application of the skills in teaching sessions conducted after the training was completed. This was also stressful for the participants since no indirect method of observation could be arranged where the spoken conversational match could be heard and other nonverbal communication observed.

A second concern was to determine if the treatment was transportable. The two nurses trained by this researcher were able to each train two nurses successfully when the same teaching plan was utilized. The two nurses taught by

the nurses trained by the researcher also achieved satisfactory ratings on the essential rapport behaviors: matching posture and mirroring significant gestures, matching voice tone, tempo and volume, using questions to elicit the client's primary representative system and using the client's primary representative system to pace by the end of the assessment.

Research Question Two: Difference in Knowledge Retention

Once the treatment had been successfully taught to the nurse teachers, the second question was addressed. Was there a difference in the knowledge retention of clients taught information on AIDS prevention by nurses using NLP rapport skills when compared with a control group of clients taught by nurses using traditional teaching methods?

Subjects

The subjects for the study were all volunteers who were not randomly assigned. The subjects were nested with the randomly assigned teachers who taught them using either the treatment (NLP rapport skills) or the control (traditional) curriculum according to how they were trained. Each nurse taught eight subjects with the previously mentioned exceptions. Nurses taught an average of two subjects a day.

Volunteers for the study were obtained by response to written notices about the study in their place of employment or after being informed of the study by their nurse, a

colleague or one of the nurse teachers. Included on the written announcement of the study was the researcher's telephone number to be called for further information. The posting also included a statement that this number could also be used to notify the researcher if they did not want to be asked to volunteer as required by a human subjects committee. No one called for this purpose.

Client volunteers came from a variety of community and clinical sites from across the state of Maryland and the District of Columbia. They included a nursing home, hospice and hospital staff, university students, health maintenance organization employees and a variety of health care consumers. Since confidentiality was an issue, direct access to some patients was denied; employees were taught at some institutions for this reason. Since some subjects participated during their work day, permission for the study was granted from their employers in exchange for this researcher sharing the results of the study with the agency.

Agencies and individuals were interested in participating in the research for a variety of reasons. Some agencies agreed to participate if the general (anonymous) results of the pre- and post-tests for their employees was given at the conclusion so they could evaluate the success of their own educational programs on AIDS prevention. Some institutions were beginning to develop teaching plans on

AIDS prevention and this researcher shared her materials with these employers in exchange for the right to solicit volunteers at their agency. Others saw the research as beneficial to their patients or employees and granted permission provided participation was voluntary and the nurse teachers would either be responsible for recruitment of volunteers and/or would teach the recruited volunteers at the agency at mutually agreeable convenient times so that staffing coverage would be maintained. All data were gathered during the three month period during November, 1987 through February, 1988.

TABLE 2

DEMOGRAPHIC ANALYSIS OF CLIENTS
Descriptive Statistics

	Number		
Age	Control	Treatment	Percent
18-25	15	8	18.11
26-30	12	13	19.69
31-37	13	16	22.83
38-43	12	12	18.90
44-69	12	14	20.47
Total	64	64	100.
Sex			
Male	14	18	25
Female	50	46	75
Marital Status			
Single	24	22	35.94
Married	40	42	64.06
Highest Grade Completed			
1-5th Grade	0	1	0.8
6-8th Grade	0	1	0.8
9-11th Grade	0	3	2.3
12th Grade	15	18	25.8
Some College	23	12	27.3
2 Yr College	10	13	18.0
4 Yr College	12	7	74.8
Graduate	4	9	10.2
Race			
White	56	40	75.0
Black	5	18	18.0
Hispanic	0	4	3.13
Asian	1	1	1.56
Other	2	1	2.3
Job			
Non-Nurse	48	54	79.69
Nurse	16	10	20.3

Demographic information for the participants is shown in Table 2. One hundred and twenty-eight subjects comprised this convenience sample. Ninety-six were women and thirty-two were men. Forty-six were single and eighty-two were married. The education level of the clients ranged from fifth grade for one client to graduate degrees for thirteen of the clients. Twenty-five percent (n=33) had completed high school and twenty-seven percent (n=35) had some college. Geographic spread was illustrated by the seventy-nine different zip codes recorded for the one hundred twenty-eight study volunteers. To show the relative similarities of the two groups, the treatment and control group subjects were classified according to these characteristics.

Not all subjects that were approached by their supervisors, colleagues or the nurse researchers agreed to participate. The actual number of persons who refused is not known. Reasons given for refusing to participate included lack of interest in the topic, adequate knowledge of the subject, fear that information shared during discussion would not be kept confidential thus putting them at risk of losing their job, fear of the research procedure and complicated consent forms.

Results

Statistical analysis was done to determine the answer to research question two: Is there a difference in the knowledge retention of clients taught information on AIDS prevention by nurses using NLP rapport skills when compared with a control group of clients. The use of analysis of covariance design was to control statistically any initial differences in the subjects which might have been present and which might confound differences between the two groups of subjects. This was necessary because the subjects were volunteers who were not randomly assigned to the treatment or control group. Initial screening of the data revealed that age, sex and marital status was of no significant difference in predicting post-test score which was the dependent measure for increase in knowledge. Education level was statistically significant and the groups were adjusted for the differences in this variable.

Comparisons of the groups were done on the basis of the demographic variables. Table 3 shows the pre-test scores for all groups. There were no significant differences based on age, sex, marital status or job. There was a significant racial difference when black subjects were compared with other groups. This difference in standardized test scores is previously known to exist in other areas and is also evident in this study.

TABLE 3

DIFFERENCES IN PRE-TEST SCORE ACCORDING TO RACE

Race	N	Mean	S.D.
White	96	9.5833	0.6268
Black	23	8.6086	1.2699
Hispanic	4	8.2500	1.2583
Asian	2	10.0000	0.0000
Other	3	6.6666	4.1633

Statistically significant covariates were the score on the pre-test and education level. These two variables explained a significant amount of the variance or difference in the two groups. Table 4 shows the results of the analysis.

TABLE 4

POST-TEST SCORE RESULTS OF AIDS PREVENTION TEACHING

Nested Analysis of Covariance

Adjusted F-Test for Independent Variable

Post-test score adjusted for pre-test score, Group (treatment or control) and Education *

Source	DF	Type III Sum of Squares	F test	Significance
Group (Treatment or Control)	1	3.685	3.23	0.0752
Education	7	6.632	0.83	0.5639
Pretest	1	9.057	7.95	0.0058

* Model SS= 64.51, MS= 2.22, F= 1.95, P= 0.0081 (29 df)

Mean Pre-test and Mean Adjusted Post-test Scores

Group	Pre-test Score	Adjusted Post-test Score*
Experimental	9.23	9.74
Control	9.37	9.39

*Analysis of Covariance for group differences in post-test scores adjusted for race and education (Covariate= Pre-test Scores).

The analysis of covariance adjusted the post-test means on the basis of the covariates. Prior to using the covariate analysis, a check was made on the assumption of homogeneous regression coefficients. This preliminary test indicated that a common slope could be assumed for the two groups (F=0.81 P=0.3700). After this was done, the adjusted post-test means were compared to see if the treatment and the control group were significantly different from one another.

The data was also analyzed using a logistic regression procedure. This statistical analysis compared all subjects who scored less than 10 on the pre-test. There were 70 subjects in this analysis. There remained no significant differences between the two groups even with this adjustment.

The results of these analyses revealed there was not a significant difference between the two groups after the appropriate adjustments had been made. The use of NLP rapport skills by the nurse did not result in a significant difference in knowledge of AIDS prevention information when compared with the control group.

One difficulty with the analysis was the level of pre-test scores for both groups. The pre-test scores showed that the basic knowledge for both groups was very high, the mean for both groups was greater than 9 with the highest possible score being 10.

Many factors may contribute to this outcome. A significant influence might have been the fact that trial testing of the pre-test was done in September before the study was begun in October. A major media education campaign was begun in October and many special programs on AIDS were held during that month. The print media also had numerous articles about AIDS in an effort to educate the public about the disease. These education efforts were successful as evidenced by the high pre-test scores. This is encouraging from a prevention standpoint for the essential information about AIDS prevention was known by the volunteer subjects in this study. The pre-test scores for both groups indicate that the knowledge of AIDS and its prevention was already at a high level before the teaching for the study began. Unfortunately it resulted in a ceiling effect. The high level of knowledge of the subjects before the teaching began limits the amount of increase in knowledge that can be attributed to the treatment.

Retention of Knowledge

A re-test of one randomly selected subject per nurse was done to validate retention of knowledge over time. Both groups retained the information. The mean for the eight control subjects who were retested was 9.50, SD 0.755; mean for the eight treatment group subjects that were retested was 9.37, SD 0.744. There was no significant difference in

re-test scores for either the treatment or the control group.

Although no difference between groups was seen, this analysis shows that the knowledge of basic AIDS prevention information has remained at a high level. The presentation of AIDS prevention information was effective for these subjects. This researcher asked what prior knowledge the subject had about AIDS. All said they had either seen a television program, read something in the newspaper or a magazine or had attended a workshop on AIDS. Additionally, the subjects were asked if they considered themselves at risk for contracting AIDS and to explain their answer. The subjects who did not consider themselves at risk stated they were in long term monogamous relationships and did not plan to engage in any high risk behaviors, i.e., they did not use I.V. drugs. Nurses stated they were adhering to the strict guidelines for protection from blood and body fluid contact and were more cautious at work with procedures where such contamination might occur. Two single males stated they considered themselves at risk because they were dating and sexually active. They planned to use condoms and to get to know their partner before establishing a relationship. One subject stated she was at high risk for AIDS because of past I.V. drug use. She stated she had now stopped using I.V. drugs and was in a monogamous relationship. When the post-

test information about using bleach to clean dirty I.V. needles was reviewed she said she had not remembered this and planned to tell "them" about it.

Research Question Three: Satisfaction with Nurse

Satisfaction of the client with the nurse using NLP was also an area of concern to be measured. This was determined using Risser's (1975) Tool which was shown to have validity and reliability in previous studies of client satisfaction with nurses and nursing care (Hinshaw & Atwood, 1982). The scale was modified to a forced choice, yes-no response rather than a variable scale because the teaching took place during a single interaction. The scale was divided into two areas: (a) educational relationship and (b) trusting relationship. Two content specific question on fear of AIDS were added.

There was no statistically significant difference between the treatment and the control group on the ratings given for the educational relationship area or the trusting relationship area of the satisfaction scale. Table 5 shows the actual group scores. All study participants were satisfied with the nurse who was teaching them. High scores were achieved by both groups of nurse teachers. The individual item analysis of each question in the satisfaction instrument showed no significant difference between the two groups. The nurses were unanimously viewed

as pleasant and received extremely high scores on all areas of the satisfaction instrument. On rare occasions, an item was left blank by the subject. Statements made by the participants indicated that they disagreed with the content of some questions for evaluating a teaching interaction. The overall high satisfaction ratings of the nurses by the volunteer subjects can be interpreted in many ways. Since nurses have been portrayed negatively in some of the media (Kalish & Kalish, 1985), and the opinion of these individuals for the nurse teacher was positive, it can be implied that instructions given by nurses may be viewed by the public as a positive influence. The teaching role of the nurse as shown by these ratings was positively received by all participants.

TABLE 5

SATISFACTION WITH NURSE RATING SCORES

Educational Relationship Scale

Group	N	Mean	Std. Dev.	T	DF	Level of Sig.
Control	64	6.718	0.5764	1.129	113.6	0.2612
Treatment	64	6.578	0.8126	1.129	126.0	0.2610

Trusting Relationship Scale

Group	N	Mean	Std. Dev	T	DF	Level of Sig
Control	64	10.437	1.2198	-0.238	121.0	0.8119
Treatment	64	10.484	0.9919	-.2385	126.0	0.8119

Individual Satisfaction Item Scores* by Group

*Highest possible item score = 1.

Educational Relationship Area

1. Nurse knows what s/he is talking about.

Group	N	Mean	Std. Dev.
Control	64	0.984	0.125
Treatment	64	0.984	0.125

2. The nurse gives direction at the right speed.

Control	64	1.000	0
Treatment	64	0.984	0.156

3. The nurse asks a lot of questions but once s/he finds the answers s/he doesn't seem to do anything.

Control	62	0.919	0.034
Treatment	56	0.946	0.030

4. The nurse explains things in simple language.

Control	64	1.000	0
Treatment	64	0.984	0.125

5. It is always easy to understand what the nurse is talking about.

Group	N	Mean	Std. Dev.
Control	64	1.000	0
Treatment	64	0.984	0.125

6. The nurse's explanation of AIDS helps me to feel less afraid of this disease.

Control	64	0.859	0.043
Treatment	64	0.828	0.047

7. Talking to the nurse makes me feel more informed.

Control	64	0.984	0.125
Treatment	64	0.984	0.125

Trusting Relationship Area

1. The nurse is understanding in listening to my problems.

Control	61	1.000	0
Treatment	60	1.000	0

2. The nurse should be more attentive than s/he is.

Control	63	0.984	0.125
Treatment	62	1.000	0

3. The nurse is just not patient enough.

Control	62	0.983	0.127
Treatment	64	0.984	0.125

4. If I need to talk to someone, I could go to the nurse with my problems.

Control	63	0.968	0.176
Treatment	63	0.952	0.214

5. The nurse is pleasant to be around.

Control	64	1.000	0
Treatment	64	1.000	0

6. I'm tired of the nurse talking down to me.

Control	61	0.967	0
Treatment	61	0.983	0

7. The nurse is a person who can understand how I feel.

Group	N	Mean	Std. Dev.
Control	63	1.000	0
Treatment	61	0.983	0.012

8. A person feels free to ask the nurse questions.

Control	63	1.000	0
Treatment	63	1.000	0

9. The nurse should be more friendly than s/he is.

Control	62	1.000	0
Treatment	63	1.000	0

10. Just talking to the nurse makes me feel better.

Control	62	0.983	0.127
Treatment	63	1.000	0

11. The nurse is too disorganized to appear calm.

Control	62	1.000	0
Treatment	62	0.951	0.216

12. I am still very afraid I will get AIDS.

Control	62	0.806	0.398
Treatment	61	0.868	0.340

Follow-up questioning (see Appendix N) with one randomly selected subject for each nurse teacher was done approximately one month following the initial teaching to determine if the initial opinion of the nurse had changed or remained the same over time. During a telephone interview the subject was asked their opinion of the nurse-teacher and whether this opinion had changed since the teaching had taken place.

Clients stated they had been reassured to learn the information they knew was correct. Although all the subjects questioned had a positive opinion of their nurse teacher, the comments given by subjects who had been taught by nurses for the control group were short and general. Quotes from subjects for this group are summarized in Table 6. Subjects who had been taught by the nurse using NLP rapport skills were also satisfied with the teaching interaction. However they had more and different opinions of their teachers. Table 7 depicts their comments. Their comments indicated that the presentation had been positively received, and many subjects mentioned the specific sensory system that had been used by the nurse when presenting. To illustrate this point, their comments are divided into the representative system which the clients had been taught.

TABLE 6

CONTROL SUBJECTS COMMENTS ABOUT NURSE TEACHERS

Subject 1

Nice, informative, someone you could talk to, useful information.

Subject 2

Nurse was very good, she made me feel comfortable.

Subject 3

She did a good job, I was satisfied.

Subject 4, 6 & 8

I didn't learn anything new but it was an enjoyable review.

Subject 5 & 7

Her presentation was well organized, gave correct information.

TABLE 7

TREATMENT GROUP SUBJECTS' COMMENTS ABOUT NURSE TEACHERS

Subject 1 Visual
Very good nurse, her presentation was very clear; I could understand; she was very open.

Subject 2 Kinesthetic
She was very good, she handled herself well; she came across well; she gave different ideas;calmed my fears; she was open to questions and exchange of ideas; we discussed feelings which was very nice; I had never discussed any subject that way before.

Subject 3 Kinesthetic
She made me feel comfortable even though we were discussing sex and other things like that; made me feel at ease; she was very easy to talk to.

Subject 4 Kinesthetic
I was very interested because I had a problem in the past; she was very understanding; made everything clear; it was blunt and to the point.

Subject 5 Visual
Did a good job, I had only watched one movie; she showed me correct information and answered my questions.

Subject 6 Kinesthetic
Teaching was very well done, I knew most of the information but it was still informative, I'm still afraid I may get AIDS if I need a blood transfusion; I'm afraid gays are spreading the disease on purpose.

Subject 7 Auditory
It was informative, a good discussion; she was open to questions.

Subject 8 Kinesthetic
She was relaxed and made me relaxed; I was surprised how much information I knew already; she explained everything simply, in lay person's terms.

Research Question Four: Are NLP Skills Useful

To determine the answer to research questions four and five, two one hour focus groups were held with all nurse participants in the treatment group to discuss and evaluate the experience once all data had been collected.

Usefulness of NLP

All eight nurses who were trained in the NLP rapport techniques were satisfied with the training and saw them as useful in their own nursing practices. The nurses responded with interesting comments, all felt they had gained from the experience. NLP rapport skills were described as "a new skill, an extension of active listening. NLP techniques take the client's clues and uses them to feed back new information to the client". NLP was seen as a method of getting to the client's level faster so that new information would be better absorbed. Another nurse saw NLP skills as a part of therapeutic communication. Using the skills she felt she formed relationships faster and at a different level than before.

> "NLP is a very good interpersonal skill to have. It forces you to be in communication with the other person; they feel you are paying attention to them. You observe more subtle non-verbal communication so I feel I know them better. They felt I had a great interest in them and was paying close attention to them. The person visibly relaxed as I talked to them. No one noticed that I was mirroring them, I was able to do so subtly."

Four of the nurses specifically commented that they felt the matching and mirroring techniques were especially useful in helping to relax the person. It made the "person feel comfortable, in sync". Another nurse used the term "on the same wavelength". When the subject relaxed, they too felt more comfortable. Subjects paid greater attention to the teaching when compared with previous teaching interactions conducted without NLP rapport skills. The nurses felt the skills did take practice to develop and they would need to continue to practice them.

NLP in Nursing Curriculum

All nurses who participated in the NLP research felt the content should be included in the nursing curriculum in the areas of therapeutic communication and to personalize teaching. Specific exercises so the techniques could be observed would give a better understanding than the summary previously presented. NLP rapport techniques did not contradict previously taught communication skills but were seen as a useful adjunct.

Ethical Concerns

Ethical issues related to NLP were reviewed at this time. Nurses saw the application of the rapport skills in this study as therapeutic and beneficial. They were used as a strategy to assist the subject learn essential prevention information. All agreed that caution should be used when

applying NLP to other areas. Using NLP rapport techniques could be viewed by some nurses as manipulation since the techniques were used without the subject's knowledge. When used as an adjunct to therapeutic listening, the nurses felt confident in using them. It was further discussed that it might be helpful for the client to be informed of his/her preferred predicate system and how other learning might be made easier if the same sensory channel were maximized.

Research Question Five: Future Use of NLP in Nursing

Once it had been determined that all the treatment group nurses felt the NLP skills were beneficial, the answer to the final research question was discussed by the focus groups. Did the nurses plan to continue to use the NLP skills in their own nursing practices. All the nurses initially responded positively when they were asked if they planned to continue to use the skills in their nursing practice.

Three nurses said they felt they already used many of the skills but had not been aware of them or the specific applications where they were useful. Matching and mirroring were seen as especially useful for initial interactions. Nurses planned to use the skills when teaching clients at the bedside or in other one-on-one interactions. Two nurse volunteered they had success when communicating with persons in authority. They had been positively received and felt

more confident in these interactions when employing the NLP skills. One nurse said she did not see any real difference between the NLP skills and how she was able to communicate with clients before. She saw the skills as beneficial but since they took practice, she planned to go back to her old teaching and interaction methods. Others said they had already incorporated the new skills and were using them. Specific areas where the skills were applied included diabetic, ostomy and AIDS prevention teaching. Nurses had also used the skills when meeting and interviewing clients for the first time and other interactions where communication was difficult.

CHAPTER V

Summary, Conclusions and Recommendations

Introduction

This chapter contains a summary of the research. It includes a background of the problem and a review of the procedure. The last part of the chapter presents the conclusions and recommendations.

Background of the Problem

Teaching is a major function of nurses. Teaching about health promotion and disease prevention is necessary to keep the public well and to avoid costly acute care and hospitalizations. The health of the public is maintained in part through information taught by nurses.

Questions can be raised about the preparation of nurses for the role of teacher. Teaching is one function that is implied but not directly addressed in most nursing curricula.

The subject of the teaching role for nurses is one that has attracted little attention from nurse researchers. Studies comparing teaching techniques are rare. One possible

reason for this may be the difficulty in proving the success of one teaching method over another.

Nurses are interested in teaching but many feel they are not prepared to undertake this role because of a lack of training in teaching techniques. Formal course work in teaching and in-service preparation have been suggested as means of overcoming deficiencies in preparation.

The teaching role of the nurse in one-on-one situations is part of the larger domain of therapeutic communication. The ability to communicate in such a way as to be trusted and understood by the client is the foundation of the relationship. This ability to establish a comfortable relationship with another person is called rapport. Through therapeutic communication, a positive, constructive relationship is formed with the learner; this is the first step toward bringing about a climate that will encourage the learner's cooperation. Good rapport with the client facilitates teaching.

One critical use of therapeutic communication and rapport is when providing information about such sensitive material as prevention of sexually transmitted diseases including AIDS. Teaching in this area includes reviewing intimate sexual behaviors and practices that many Americans may be uncomfortable discussing. The ability of the nurse to

make the client feel at ease affects the client's response to the teaching in these situations.

AIDS is a life-threatening disease and a major public health issue. Nurses in their role of health promotion and disease prevention must take an active part in teaching the public about AIDS and how to prevent its spread. Nurses when teaching AIDS prevention should employ skillful communication techniques so that the information will be heard, understood and followed in order to prevent the spread of this deadly disease.

Neurolinguistic programming (NLP) is one communication technique that may be useful to nurses when teaching information about sexually transmitted diseases including AIDS. This technique combines acute powers of observation with a flexible individual response to clients. NLP has many components but all build on the basics of rapport. The rapport skills include both verbal and nonverbal behaviors. The non-verbal behaviors include postural matching and mirroring of gestures when responding. Verbally the NLP practitioner matches the subjects voice tone, tempo and volume when responding and uses questions to determine which of the senses- visual, auditory, or kinesthetic, the person uses when receiving and processing new information. This can be determined by listening to the subject's choice of "predicates" or sensory based words given in responses. Once

this sense is identified it is used by the NLP practitioner in the form of predicates during communication.

Use of these techniques are said by Bandler and Grinder (1976) to decrease the perceived differences between the speaker and listener. Rapport is quickly established once trust is gained. The individual is more willing to accept what is being said since it is presented in such a manner as to be similar to the client's own thoughts. Such rapport skills would be useful in nurse-client one-on-one teaching interactions, especially when teaching disease prevention.

Improvement in communication skills should improve nurses teaching abilities and in doing so should foster greater client satisfaction with the nurse. If information is presented in such a way as to be similar to that used by the client, there should be greater understanding of AIDS prevention. As such, use of NLP and provision of training for nurses may be very helpful in enhancing health teaching.

Statement of the Problem

The practice of nursing involves one-on-one teaching interactions. Skillful communication is essential when teaching so that the content is presented in such a way as to be received and understood by the client. Rapport is the first step in establishing the relationship so that the teaching can begin. No one technique is universally effective. The study was designed to determine if NLP

rapport skills were useful to nurses during one-on-one client teaching interactions.

This study sought to answer the following research questions: (a) Could NLP rapport skills be successfully taught to nurses? (b) Was there a difference in the knowledge retention of clients taught information on AIDS prevention by nurses using NLP rapport skills when compared with a control group of clients using traditional teaching methods? (c) Did the use of NLP rapport skills increase the client's satisfaction with the nurse? (d) Did nurses identify NLP rapport skills as useful to their own nursing practices? (e) Did nurses plan to continue to use the NLP rapport skills in their nursing practices?

Procedure

The study utilized sixteen volunteer RN's who were randomly assigned to two groups. One group was first taught the basic information about AIDS and how to prevent its spread. Next NLP rapport skills were taught during seven hours of training divided over two non-consecutive days. Nurses demonstrated mastery of the techniques on videotapes which were rated on eight parameters by two NLP practitioner judges. Each nurse then used a standard curriculum (Quackenbush & Sargent, 1986) for teaching AIDS prevention information using the NLP rapport skills to eight volunteer clients. After hearing an explanation of the study,

providing confidential demographic information and giving informed consent each volunteer client then filled out a pre-test, after being taught the lesson on AIDS prevention, each client completed the post-test and a satisfaction questionnaire about the nurse teacher. The teaching lasted approximately from 15 to 30 minutes.

The eight nurse who were randomly assigned to teach the control group of clients also were taught the basic information about AIDS and how to prevent its spread. During seven hours divided over two non-consecutive days they met and discussed ethical issues about AIDS and theories of adult learning. These eight nurse each taught eight volunteer clients AIDS prevention information using a standard curriculum (Quackenbush & Sargent, 1986) provided by the researcher. The procedure of explanation of the study, obtaining confidential demographic information and informed consent was followed as with the nurse-treatment group. Clients in the control group also completed a pre-test of their knowledge of AIDS prevention information, were taught the essential information and then completed the post-test and satisfaction questionnaire rating their nurse teacher.

One randomly selected client for each nurse was contacted by telephone and interviewed. Their opinion of the nurse was discussed and questions were asked about whether

this opinion had changed since the initial encounter. At the end of the interview, the knowledge post-test was repeated to determine their retention of the information over time.

Findings

Nurses' acquisition of NLP rapport skills. A first step in the study was to determine if the NLP rapport skills could be taught to nurses. Nurses who completed the training acquired the NLP rapport skills. Two other nurses were also trained in the techniques using the same curriculum. These two nurse were each able to train two other nurses in the rapport skills as validated by the judges ratings of videotapes done at the completion of the training. The study was able to demonstrate that NLP rapport skills can be successfully taught to nurses and that it is transportable.

Clients' knowledge of AIDS. Statistical analysis using analysis of covariance was done to determine if there was a difference in the knowledge of AIDS prevention information for clients when taught by nurses using NLP rapport skills when compared with the control group. Score on pre-test and education level were shown to be statistically significant variables for the two groups and the scores were appropriately adjusted using these two variables as covariants.

There was no significant difference between the treatment and the control group as shown by the pre-test and post-test scores once they had been adjusted (Mean pre-test scores: Treatment= 9.23; Control= 9.37. Mean adjusted post-test scores: Treatment= 9.74; Control= 9.39).

Both groups retained the knowledge over time. The results of the post-test administered approximately one month after the initial teaching revealed no significant difference in the two groups. The mean for the eight re-tested control subjects was 9.50, SD 0.755; mean for the eight re-tested treatment group subjects was 9.37, SD 0.744.

Client satisfaction analysis. Results of client satisfaction with the nurse teacher was determined by using analysis of variance to analyze the responses given to questions about the nurses educational relationship and trusting relationship using a modified tool based on one created by N. Risser (1975). There was no statistically significant difference between the two groups. All clients were satisfied with their nurse teachers. High scores were achieved by both groups of nurse teachers.

Follow-up questioning (Appendix N) of the randomly selected participants revealed that they remained satisfied with the nurse who had taught them the AIDS prevention information. Some clients commented that the information was already known to them but it was reassuring to learn the

knowledge they had received elsewhere was correct. Clients who had been taught by nurses using NLP tended to have more comments and remembered specifics about the interactions as compared to the clients who had been taught by nurses using the traditional format.

Nurses' evaluation of NLP. Two one hour focus groups were held to determine the participant's opinion of the usefulness of NLP. All eight nurses were satisfied with the training and agreed that the rapport skills techniques were valuable. These nurses described NLP as a useful extension of the therapeutic communication skills they already possessed. In particular the nurses felt the NLP rapport skills had three benefits with clients : (a) the skills enabled them to personalize their presentations and get to the level of the client easily; (b) NLP techniques assisted the person to relax; (c) for some, the use of NLP rapport skills resulted in the client paying closer attention to what had been taught when they compared with prior memories. All nurses felt the NLP rapport skills would be useful knowledge for other nurses and should be included in the nursing curricula in the areas of therapeutic communication and individual teaching.

Future application of NLP skills. Responses given to questions during the focus groups revealed future use for NLP rapport skills. All nurses trained in the NLP rapport

skills said they planned to continue to use them in their practices. Specific areas named included future one-on-one teaching and during other interactions where the matching and mirroring could be employed to assist the client to feel at ease.

Conclusions

The study sought to determine if the NLP rapport skills could be useful to nurses when teaching. Rapport first must be established before teaching can begin. Steps used in deciding the answer to the overall question included the development of a two day training course which, when implemented, established that the rapport skills could be taught in a short format to RNs. The skills were then applied to teaching AIDS prevention to volunteer clients to determine if the use of the techniques resulted in better knowledge retention or client satisfaction when compared with a control group. Last, the techniques were evaluated by the nurses who used them. Their opinions were positive. The conclusions that can be drawn from the study are: (a) NLP rapport skills can be taught to nurses; (b) NLP rapport skills can be used effectively for one-on-one teaching; (c) nurses felt the skills are a useful addition to therapeutic communication techniques already being taught in curricula; (d) nurses plan to continue to use the skills in their own

practice. The separate parts of the study are defined by the individual research questions.

Success of NLP Skills Training

All eight nurses trained in the NLP rapport skills were able to demonstrate mastery of the skills on videotapes that were rated by judges who are NLP practitioners, have masters degrees, are RNs and nurse educators. The two non-consecutive day format provided adequate time for skill practice and technique mastery. The practical aspect of the skills allowed participants to incorporate the practice into daily activities. Training in the techniques could be incorporated into nursing curricula along with therapeutic communication content. Another option for adult learners would be to offer the course in a workshop on two days scheduled a week apart to allow for practice time and homework completion.

Videotaping was identified as the most helpful training technique by all participants. Of the eight nurses who were the teachers for the treatment group, none had been videotaped as part of communication skills training. The nurses unanimously felt this to be a very useful technique. Even though they were uncomfortable interviewing in front of the camera, they were reassured when they saw their ability to perform the skills. Videotaping has been used

successfully to train counselors, physicians, teachers, public speakers and many others. The comments by the group make it apparent that it should also be used more in communication skills training for nurses.

It takes many hours of course work and extensive training and practice to become a certified NLP practitioner. The basic NLP rapport skills of postural matching and mirroring and the verbal techniques of matching voice tone, tempo and volume and identification and use of the client's predicates when responding can be taught by persons not certified in NLP if they are appropriately trained and follow a prepared curriculum. This fact makes the skills more useful to nurses and nursing for these selected techniques were seen as an adjunct to therapeutic communication and skills that are already included in nursing practice.

Increase in Knowledge of AIDS Prevention

Demographic analysis shows that the majority (80%) of the study participants were in the 18-43 age range where most of the AIDS cases are found. This segment of the population is being adequately educated by the methods that are presently in use. Based on the results of the study, persons of different races, various education levels and geographic areas are informed about the basic information about AIDS and its prevention.

The major problem with the study was the impact of history on the knowledge level of both groups of clients. The media education campaign resulted in high knowledge levels for both groups and led to a ceiling effect. One of the major assumption of ANCOVA was violated by this. The groups were not equally distributed in a normal distribution of knowledge. Random assignment would not have assisted to alleviate this problem however.

Client Satisfaction with Nurses

Conclusions can be drawn about client satisfaction with the nurses. All study participants were very satisfied with the nurses who taught them the AIDS prevention information. The study presented nurses in a different role than the sometimes unfavorable one presented by the media (Kalish & Kalish, 1985). The participants of this study indicated by their answers to questions on the satisfaction questionnaire that these nurses were seen as both educationally competent and someone that the person could trust. Nurses in both groups were able to provide clear information that was well received by the participants. Nurses should be encouraged by the ratings and should continue to teach health promotion and disease prevention information. The subjects were satisfied with the nurses even though the test scores indicated that the information provided was already known.

One inference from this study could be that the public like to have personal validation that their knowledge is correct. Nurses are seen as professionals whose opinion is respected and sought. The reassurance they provided may have resulted in the overall positive ratings given all nurses regardless of the teaching technique that was employed.

Usefulness of NLP Rapport Skills Training

All the nurses who were trained in the NLP rapport skills felt the knowledge was useful. This is encouraging from an adult education point of view where attempts are made to adapt the learning to the needs and experience of the individual. The interactive nature of the skills training allowed the nurses to develop and practice the skills in a supportive environment before they were required to use them with clients. Nurses were motivated to join the study initially because they wanted to teach the AIDS prevention. The addition of new communication skills was an unexpected bonus that was appreciated by the nurses. Some nurses who participated are not currently in nursing practice where the skills could put to immediate use. The one nurse who was actively involved with drug and substance abuse education was most impressed with the difference she saw in the attention of her population of clients when compared with her old method of teaching. Other nurses specifically commented on the visible relaxation response

they noted when the rapport skills were employed. These statements lead this researcher to support the original proposal that NLP rapport skills are useful to nursing practice especially when discussing such intimate subjects as sexually transmitted diseases. The nurses evaluation of the usefulness of the techniques suggests the need for further research. This study was designed to provide short exposure for multiple clients. Before it can be decided whether to discard or adopt the techniques, a follow-up study should be conducted to provide more in-depth exposure to the technique. Four nurses trained in NLP could use the techniques when teaching and communicating with a client over the course of one week. A comparison could be made with a separate client taught for the same amount of time by the same nurse without NLP. On-going evaluation of the teaching-learning process could be documented to determine if more in-depth of exposure to the treatment would yield different results.

Some suggestion for incorporating the teaching content into general curricula can be made. The control group of nurses taught the AIDS prevention information using prepared scripts. There was not a comparison group of clients that was taught by nurses without the prepared curriculum. Perhaps one area for future study would be to just provide the nurses with the basic information on AIDS and have one

group develop their own teaching materials without organized structure and determine the success or failure on established content pre- and post-tests. This was not done for this study. The nurses in both groups have the skill to follow established curricula without difficulty.

The ethics of using an influencing technique on an unwary public may concern some readers. The discussion during the focus group included a review of this topic. All participants acknowledged the potential for gaining control over someone with the use of techniques that are not readily apparent to the individual. The nurses in the treatment group did not regard the use of NLP as unethical. NLP rapport skills as they were implemented and applied to the area of health promotion, disease prevention were not seen as unethical influence. Nurses discussed the fact that any listening technique might be similarly viewed as influence and NLP, while more individualized, was really an extension of attentive listening and responding. The use of the client's predicate can be interpreted as reflection.

When the issue of the training of the nurses in the new technique without their complete understanding of the behavioral changes that would occur was discussed, the nurses did not feel they had been coerced or unduly influenced themselves. They felt the changes in their behavior had been voluntary and temporary. They do not

utilize the skills in all situations nor would they consider it appropriate to do so.

Areas of Concern

History had a big impact on the level of knowledge of the clients in the study population. It is encouraging from the standpoint of health promotion and disease prevention that within a two month period the level of knowledge of the samples tested increased to such a high level. The basic facts about the disease and how to prevent its spread were known by the participants. The media education campaign was successful and reached a cross section of the public. Media education has been shown in the past to be effective in educating large groups of people in a short period of time. Volunteer clients commented that they were reassured that their knowledge was correct by the nurse's presentation. The follow-up shows that the retention of this knowledge remained at a high level. The media should be used in the future to educate the public for it is effective and not as costly or time consuming as individual instruction. Individual counseling sessions can be used to discuss any intimate question or specific situations the client may have.

One additional concern was about sharing the knowledge gained about the client's choice of predicates. It was agreed that this information might be useful to the client

and could easily be shared so that the client might use this primary sense in future learning situations.

The study is not generalizable because of the subject selection and design. Major problems with internal validity are: (a) history- things that happen to subjects over time that have nothing to do with the study. The greatest impact on this study was the major media education campaign that occurred during the time the nurses were being trained for the study. By the time the nurses completed the training, the clients they taught had acquired a high level of knowledge about AIDS. This made it difficult to establish that the techniques could increase the client's knowledge of the subject. (b) Unreliability of instruments had an effect. The satisfaction instrument showed overall a positively skewed response. The volunteers were influenced by their mood and gave extremely high positive ratings to all the nurses. (c) Bias in the assignment of subjects to groups had an effect. The volunteers recruited by the nurses were not homogeneous. Solutions for this include recruiting a larger pool of volunteers which then could be matched on a selected criteria and assigned to either the treatment or control group. Training by the nurses for better client selection for homogeneity would be an alternative solution. External validity is also compromised because certain conditions in the investigation differ from those in the generalization

specifically, confounding characteristics of the particular samples. The samples do not adequately represent the population to which results are to be generalized (Campbell & Stanley, 1963). When subjects are not randomly assigned, it is difficult to draw definite conclusions from a study (Spector, 1981).

In light of the findings, the study was able to show that the NLP rapport skills could be taught to nurses. The volunteer nurses were enthusiastic in their support of the techniques. One nurse who is most directly involved with similar patient teaching interactions stated there was a significant difference in the attention of her clients when compared with previous teaching methods. The volunteer client's comments added support to the statements made by the nurses. NLP rapport skills aided the nurses in establishing rapport with their clients. The clients felt comfortable and spent time discussing the subject with the nurses.

Current nursing curricula includes therapeutic communication. Rapport skills of matching and mirroring could be incorporated into this content to assist the client to feel comfortable when communicating. Skill practice would be a difficult addition to these curricula. The skills would be of benefit to registered nurses for use in teaching or other one-on-one interactions. The course could be presented

as designed in an adult continuing education course or seminar. This format would be preferable for it would allow for the necessary practice time which is essential for skill mastery.

Recommendations

The results of the study show that rapport skills can be taught to interested nurses. The nurses' use of the skills enabled clients to feel at ease and were effectively used to present AIDS prevention information. Nurses who participated in the study plan to continue to apply the skills in their nursing practice especially in other teaching interactions and when communicating one-on-one with clients.

As a result of the findings of the study, this researcher feels confident recommending:

1. NLP rapport skills, especially postural matching and mirroring, be included in future nursing curricula in the areas of therapeutic communication and personalized teaching techniques.

2. Future research on the relaxation response that was described by the nurses be validated with automatic blood pressure and pulse calibrations done while using the rapport skills when communicating with another population.

3. A future study using a smaller population to determine if more in-depth exposure to the treatment over

determine if more in-depth exposure to the treatment over time would yield different results should be done.

4. Follow-up qualitative research should be done to study the response of clients to the NLP rapport skills during and immediately after being taught using observation and a structured interview format. Nurses could be interviewed throughout the training and implementation of the skills to gather more data about the assimilation of the techniques as it occurs.

5. Nurses should continue to teach disease prevention and health promotion. The public is satisfied with nurses in these roles. Individual counseling techniques may be a useful adjunct to effective media education campaigns.

Clients who were taught by nurses using NLP skills were satisfied with the nurses who taught them. NLP rapport skills were positively evaluated by the nurses who used them. It was agreed by the nurse participants of the study that NLP rapport skills would be a beneficial adjunct to current teaching methods.

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APPENDIX A

Nurses Script Explaining Study to Volunteers

Hello, my name is _____. I am a registered nurse and am working with Mary Ann Wilkinson, a nursing faculty member at the University of Maryland Baltimore County in the R.N. to B.S.N. program. Together we are conducting a research study she has designed to assist nurses to better educate the public about AIDS prevention. She is doing her doctoral dissertation in Adult Education at Virginia Polytechnic and State University at Falls Church, Virginia on this subject.

I would like to make it clear, though, that you are free to refuse to participate, but if you decide to participate, you can withdraw at any time. If you decide to participate, I will ask you to complete a short pretest on what you already know about AIDS and then listen to a brief lecture on AIDS. Following the lecture, you will be given another short posttest plus asked to complete a rating scale about my presentation. In addition, you are requested to fill out a brief demographic questionnaire and may possibly be contacted one month from now to answer a few additional questions about what you were taught. Your responses will be kept confidential. There will be no names reported in the study and only group statistics will be used.

APPENDIX B

Volunteer Client Informed Consent

School of Nursing

UNIVERSITY OF MARYLAND

655 West Lombard Street

Baltimore, Maryland 21202

Title of Research: AIDS Prevention Education Training for R.N.'s

Principal Investigator: Mary Ann Wilkinson, RN,MSN (

Faculty Advisor: Dr. Harold Stubblefield, Va. Tech (

Subject's Name: _____

___

Statement of Informed Consent

I hereby agree to participate in a research study investigating the best way for nurses to teach AIDS prevention information. This study is being conducted by Mary Ann Wilkinson, R.N., M.S.N., Doctoral Candidate at the Virginia Polytechnic Institute and State University and also a faculty member at the University of Maryland at Baltimore School of Nursing. The study is under the direction of Dr. Harold Stubblefield (phone collect 703 698-6044) and is being conducted in collaboration with the University of Maryland at Baltimore School of Nursing.

PURPOSE: The purpose of the study is to determine the best method for nurses to teach AIDS prevention.

PROCEDURE: I am being asked to provide basic information for identification purposes, take a ten question AIDS knowledge pretest, listen to a short lecture on AIDS, complete a similar ten question AIDS knowledge posttest, and complete a rating scale on the nurse who taught me. The teaching will take place on a one-to-one basis and will take approximately 15-30 minutes. I also understand that I may also be part of a small number of participants who is contacted by telephone to retake the AIDS posttest and answer similar questions about the nurse who taught me. This interview will take approximately 5 minutes.

BENEFIT: Although the results of the study will be used to train future nurses, the only direct benefit I receive by being a participant is learning the current facts about AIDS and how to prevent this disease. Participating in this study will pose no risk to me.

CONFIDENTIALITY: I understand that my responses to these questions will be kept strictly confidential and that any report of this study will be presented in such a way that I cannot be identified. The agency will not know individual responses.

RIGHT TO WITHDRAW: My participation in this study is completely voluntary. I may withdraw from the study at any

time and refusal to participate will not affect me or future services I may receive from the University of Maryland or Virginia Polytechnic Institute and State University or my position at this agency.

COST/COMPENSATION: I will not receive any compensation for participating in the study; there is no cost for participating.

UNIVERSITY STATEMENT: Information regarding this research may be obtained from the HUMAN VOLUNTEERS COMMITTEE, University of Maryland at Baltimore (UMAB), Bressler Research Building, Rm 14-002, 655 W. Baltimore Street, Baltimore, MD. 21201 (301 328-5037).

I have received a copy of this consent form.

SIGNATURES

_____ _____

_Date Subject Signature

_____ _____

_

Date Signature Prin. Investigator/RN

Trainer

_____ _____

_____Date Witness Signature

APPENDIX C

Volunteer Client Demographic Questionnaire

Name_____

Street Address_____

City_____ State_____ Zip Code_____

Home Phone_____ Work Phone_____

Occupation_____

Age_____ Sex_____

Are married? Yes_____ No_____

Highest grade of school completed_____

APPENDIX D

AIDS Knowledge Pre-Test

TEACHING AIDS PREVENTION Researcher:M.A.Wilkinson (301 992-1862)

Circle the best answer for each question.

1. Who can get AIDS?

   a. Gay men

   b. People with hemophilia.

   c. Anyone.

2. Which of these activities never spreads AIDS?

   a. Having intercourse without a condom.

   b. Donating blood.

   c. Sharing IV needles in drug use.

3. You cannot tell by looking at someone whether s/he has AIDS.

   a. True b. False

4. What is one important way to reduce your risk for AIDS ?

   a. Make sure your sexual partner looks healthy.

   b. Don't hug IV drug users.

   c. Abstain from sex or practice safe sex.

5. What is safe sex ?

   a. Look for spots on your partner's body.

   b. Don't exchange blood, semen or vaginal secretions.

   c. Only have sex once in a while.

6. Which of these is a way the AIDS virus is transmitted ?

   a. On toilet seats.

   b. Someone coughing.

   c. Intimate sexual contact.

7. A woman who once used IV drugs stopped doing so about two years ago. She feels perfectly healthy. Does she need to worry about the possibility of her sexual partner getting AIDS from her ?

   a. Yes b. No

8. Condoms, when properly used, can protect you from infection with the AIDS virus.

   a. True b. False

9. Which of these activities might expose you to AIDS ?

   a. Eating in a restaurant that employs a gay cook.

   b. Getting an amateur tattoo from a friend.

   c. Using a public drinking fountain.

10. Which of the following is in a high risk group for AIDS ?

   a. Asian women.

   b. Babies born to parents who use IV drugs.

   c. Women who take tranquilizers.

APPENDIX E

Measurement Instrument for Patient Satisfaction with Nursing Care

Teaching AIDS Prevention Researcher: MA Wilkinson (301 992-1862)

Please answer Yes or No for each question.

Educational Relationship Area	Rating
1. The nurse really knows what s/he is talking about.	_____
2. The nurse gives direction at just the right speed.	_____
3. The nurse asks a lot of questions but once s/he finds the answers s/he doesn't seem to do anything.	___
4. The nurse explains things in simple language.	_____
5. It is always easy to understand what the nurse is talking about.	_____
6. The nurse's explanation of AIDS helps me to feel less afraid of this disease.	_____
7. Talking to the nurse makes me feel more informed.	_____

Trusting Relationship Area	
1. The nurse is understanding in listening my problems.	___
2. The nurse should be more attentive than s/he is.	___
3. The nurse is just not patient enough.	___

4. If I need to talk to someone, I could go to the nurse with my problems. ___

5. The nurse is pleasant to be around. ___

6. I'm tired of the nurse talking down to me. ___

7. The nurse is a person who can understand how I feel. ___

8. A person feels free to ask the nurse questions. ___

9. The nurse should be more friendly than s/he is. __

10. Just talking to the nurse makes me feel better. ___

11. The nurse is too disorganized to appear calm. ___

12. I am still very afraid I will get AIDS. ___

APPENDIX F

AIDS Knowledge Post-Test

TEACHING AIDS PREVENTION Researcher: M.A.WILKINSON (301 992-1862)

Circle the correct answer for each question.

1. AIDS is caused by :

   a. a virus b. bacteria c. rectal intercourse

2. AIDS primarily affects the :

   a. liver b. muscles c. immune system

3. How is the HIV virus spread ?

   a. sexual contact or needle sharing

   b. use of public bathrooms or swimming pools

   c. normal daily contact in school or at home

   d. hugging or hand shaking

4. AIDS is a disease which affects only gay men and IV drug users.

   a. True b. False

5. It is possible to get AIDS by donating blood.

   a. True b. False

6. Which of the following groups are considered high risk for getting AIDS ?

   a. health professionals working with persons with AIDS

   b. family and friends caring for persons with AIDS

   c. infected persons and their sexual partners

   d. all of the above

7. How can persons protect themselves from AIDS ?

a. do not share IV drug needles

b. do not have sex with persons who are infected

c. use a condom and avoid sexual practices that may injure

d. abstain from sexual activity except in a monogamous relationship with a partner known to be free of AIDS.

e. all of the above

8. Everyone infected with the HIV virus will develop AIDS.

a. True b. False c. Unknown

9. You can be infected by someone who seems perfectly healthy.

a. True b. False

10. You can clean an IV needle by letting warm water run over it until all signs of blood are gone.

a. True b. False

APPENDIX G

AIDS Prevention Curriculum

BASIC LECTURE

AIDS stands for Acquired Immune Deficiency Syndrome. It's a disease that breaks down a part of the body's immune system so the person with AIDS can get a variety of unusual, life-threatening illnesses that healthy people don't get. It's a very serious disease.

You may have heard that AIDS is a disease gay men get. That's true, but other people get it as well. Women and children, babies, IV drug users, heterosexuals, even some teenagers have gotten AIDS. In the United States today, most people with AIDS are gay or bisexual men. An increasing number of heterosexuals are being affected too. In some countries, almost all cases of AIDS are among heterosexuals.

AIDS is caused by a virus. Anyone infected with that virus can become ill, regardless of age, sex, race, sexual orientation, or anything else.

The AIDS virus, just like many other viruses, can cause a wide range of symptoms. There are basically three ways people might show infection with the AIDS virus:

1. Many people infected with the virus don't actually get sick. They look and feel perfectly healthy. Such people can pass the virus on to others. They are called "asymptomatic

carriers," that is, carriers without symptoms of the disease.

2. Other people develop symptoms related to AIDS, but do not have one of the diseases that medical researchers use to diagnose AIDS. These people are said to have AIDS-related complex (ARC). They can be fairly healthy or quite sick. Some people with ARC may become so ill they die without ever having been diagnosed with AIDS.

3. Finally, some people infected with the virus develop full-blown AIDS. This is usually the most serious form of the disease. Over half the people diagnosed with AIDS so far have died, and very few have survived five years.

Because so many people are healthy carriers of AIDS and do not know they are infectious, it has been hard to stop the spread of the disease. The AIDS virus also has a long incubation period--it can take quite a while between the time a person is first infected and the time he or she actually gets sick. With AIDS, this might take anywhere from six months to seven years or more.

Fortunately, AIDS is a <u>difficult</u> disease to get. Let me tell you some of the things you can do that will <u>not</u> expose you to the AIDS virus. You <u>cannot</u> get AIDS by touching or hugging someone, sharing food or drinks, riding buses. You <u>cannot</u> get it from toilet seats or sinks or swimming pools or hot tubs. You <u>cannot</u> get it from drinking fountains. You

cannot get it by sharing telephones, paper or pencils. You cannot get it form someone coughing or sneezing on you. You cannot get it from donating blood.

People only get AIDS one way--the semen, vaginal secretion, blood (or perhaps urine or feces) of someone infected with the AIDS virus directly enters the blood stream of someone who is not infected. Here are some ways that might happen:

1. AIDS can be passed between sexual partners engaging in either vaginal or anal intercourse, and it may be passed between partners engaging in oral-genital or oral-anal sex.
2. The AIDS virus can enter the blood stream directly when IV drug users share needles. AIDS may be transmitted by people sharing needles for tatooing without sterilizing them properly.
3. In the past, some people have gotten AIDS from blood transfusions, or from special blood products for people with diseases like hemophilia. Now, blood donations are screened and tested, so the blood supply is quite safe. The medicines for people with hemophilia are pasturized (heat-treated) to destroy the virus.
4. Women infected with the AIDS can pass AIDS to newborn children. The children are infected before birth, when they share the mother's blood system.

These are the ways we know that AIDS is transmitted. We know it is not spread by casual contact. Even transmission by saliva (kissing, for example), sweat, or tear, doesn't happen. In all the cases reported in the United States (23,000 as of August 1986), we have never seen such transmission. You might have occasionally read about cases where this is claimed to have happened, but on closer investigation, none of these claims has been true.

Since you can see now that AIDS is not easy to get, and since you know the ways people can get it, what can people do to make sure they don't get it?

Two simple rules:

1. Don't take any body fluids directly into your body during any kind of sexual intercourse. Use condoms (rubbers)--they are able to stop the AIDS virus when used correctly.
2. Don't share needles for IV drugs or tattoos ever.

Remember that you cannot tell just by looking at someone whether he or she has been exposed to the AIDS virus. Some people infected with AIDS look and feel very healthy. Your best bet is to follow these two prevention guidelines all the time.

From: Quackenbush, M. & Sargent, P. (1986). Teaching AIDS: A resource guide on acquired immune deficiency syndrome. Santa Cruz, CA: Network Publications, p.23-25.

APPENDIX H

Questions for Nurses to Rate NLP Training

I am asking for your help in appraising the effectiveness of the neuro linguistic programming techniques training. I would like your candid opinion of the experience.

Interview questions:

1. Please tell me whether or not you thought the techniques in this class could be used effectively when working with clients?

2. Do you plan to use the NLP techniques training you received in your nursing practice?

3. If so, when and where?

4. If not, please explain your reasons.

5. What did you find most helpful about the training?

6. What did you find least helpful about the training?

7. In what ways could the training be improved.

APPENDIX I

Rapport Measurement Instrument

Rating Scale 4=Always 3=Usually 2=Sometimes 1=Rarely 0=Never

During the interaction with the client, the interviewer:

1. Matches body posture. ____
2. Uses questions to elicit PRS. ____

When verbally responding:

3. Mirrors subject's significant gestures. ____
4. Matches subject's voice volume. _____
5. Matches subject's voice tone. _____
6. Matches subject's voice tempo. _____
7. In conversation matches subject's predicates. _____
8. At end of interview, paces using predicate matching. _____

APPENDIX J

Nurses Consent Form

This is to certify that I _____ , agree to participate in a study on AIDS (acquired immune deficiency) disease prevention. I understand that this study is investigating the best way for nurses to teach AIDS prevention information. I understand that I will be doing this as part of a research project of the Virginia Polytechnic Institute and State University. The study has been reviewed and approved by Human Subjects Review at Virginia Polytechnic and State University and the university will assume any liability incurred as a result of participation in the study.

I will be trained in how to teach AIDS prevention to clients. Mary Ann Wilkinson, RN, MSN. and will provide instruction and guidance for me throughout the study. I will be teaching volunteer clients at an approved site of my choice. I will teach clients the information as I have been trained. The teaching will be on a one to one basis. Prior to the actual instruction, I will have the client sign an informed consent, fill out a demographic questionnaire and take a knowledge pretest. Following the AIDS teaching, I will have the client fill out a short attitude questionnaire and complete the knowledge post-test.

I understand that I will receive clinical time credit for participating in the project. I may also receive credit on the clinical evaluation tool. My participation is completely voluntary. My decision not to participate in this study will in no way affect my grades or status as a student.

I understand that I am free to withdraw from participation in the study at any time. I understand that all information I provide will be treated with confidentiality, no names will be reported in the study. My name will only be used to identify the clients that I have taught and gather all of my information from the forms so that they can be analyzed together. Once all of my information is gathered, my name will be removed and only my identification number will be used. I understand that the data from this study will be helpful in finding the best method for nurses to teach clients about AIDS prevention. Results from the study will be reported as group data to other professionals.

I understand that the volunteer nurses will be divided into two groups and will be trained. I understand that all participants will have the opportunity to learn both treatments on a voluntary participation basis once the study is completed.

_____ _____

Date Signature of Participant

I have fully explained the nature and purpose described above to the participant _____ .

_____ _____

Date Signature of Researcher

APPENDIX K

Nurses Consent Form

School of Nursing

UNIVERSITY OF MARYLAND

655 West Lombard Street

Baltimore, Maryland 21202

Title of Research: AIDS Prevention Education Training for R.N.'s

Principal Investigator: Mary Ann Wilkinson, RN,MSN (301 992-1862)

Faculty Advisor: Dr. Harold Stubblefield, Va. Tech (703 698-6044)

Subject's Name: _____

Statement of Informed Consent

I hereby agree to participate in a research study investigating the best way for nurses to teach AIDS prevention information. This study is being conducted by Mary Ann Wilkinson, R.N., M.S.N., Doctoral Candidate at the Virginia Polytechnic Institute and State University and also a faculty member at the University of Maryland at Baltimore School of Nursing. The study is under the direction of Dr. Harold Stubblefield (phone collect 703 698-6044) and is being conducted in collaboration with the University of Maryland at Baltimore School of Nursing.

PURPOSE: The purpose of the study is to determine the best method for nurses to teach AIDS prevention.

PROCEDURE: I understand that I will be randomized (by chance) to one of two types of teaching techniques explained below:

A = Traditional methods for teaching AIDS.

B = Teaching AIDS using a new method for rapport.

Once trained in a teaching method I will be presenting AIDS prevention information to adult clients at an approved site of my choice. Once I have been trained, I will teach a minimum of eight adult clients who I will explain the study to, obtain an informed consent and will ask to provide basic information for identification purposes, take a ten question AIDS knowledge pretest, listen to a short lecture on AIDS, complete a similar ten question AIDS knowledge posttest, and complete a rating scale on me. The teaching will take place on a one-to-one basis and will take approximately 15-30 minutes. A small random sample of these participants will also be contacted by telephone to retake the AIDS posttest and answer similar questions about me. This interview will take approximately 5 minutes.

After the study has been completed, I will be offered the chance to learn the alternate teaching method.

BENEFIT: Although the results of the study will be used to train future nurses, the only direct benefit I receive by

being a participant is learning the current facts about AIDS and how to present information to clients to help prevent
this disease. Participating in this study will pose no risk to me.

CONFIDENTIALITY: I understand that all responses to these questions will be kept strictly confidential and that any report of this study will be presented in such a way that subjects and nurses cannot be identified. The agency will not know individual responses.

RIGHT TO WITHDRAW: My participation in this study is completely voluntary. I may withdraw from the study at any time and refusal to participate will not affect me or future services I may receive from the University of Maryland or Virginia Polytechnic
Institute and State University.

COST/COMPENSATION: I will not receive any compensation for participating in the study; there is no cost for participating.

UNIVERSITY STATEMENT: Information regarding this research may be obtained from the HUMAN VOLUNTEERS COMMITTEE, University of Maryland at Baltimore (UMAB), Bressler Research Building, Rm 14-002, 655 W. Baltimore Street, Baltimore, MD. 21201 (301 328-5037).

I have received a copy of this consent form.

SIGNATURES

_____	_____
Date	Nurse Trainer
_____	_____
Date	Signature Principal Investigator
_____	_____
Date	Witness Signature

APPENDIX L

Nurses Demographic Questionnaire

Please answer all of the following questions.

Name_____

Street Address_____City_____

State_____ Zip Code_____Phone_____

Work Phone_____

Age ( ) 20-25

( ) 26-29

( ) 30-34

( ) 35-39

( ) 40 and over

Type of nursing education program:

( ) Diploma

( ) Associate Degree

Year of graduation _____

How many years have you been employed as a nurse?

Full time _____ Part time _____

Have you taken formal patient teaching courses?

( ) Yes ( ) No

When at work, how much time do you spend doing patient teaching?

_____ minutes _____ hours per day.

How many days per week do you do patient teaching? _____

APPENDIX M

NLP Teaching Strategies for AIDS Prevention

Guidelines for using the AUDITORY Rep. System:

Incorporate the client's own language but use such phrases as:

"Now that I know a little about how you **TAKE IN** things, I'd like you to **LISTEN** to some information about AIDS."

REINFORCE ALL WRITTEN MATERIALS WITH VERBAL EXPLANATIONS, HAVE THE CLIENT EXPLAIN INFORMATION IN HIS/HER OWN WORDS, REFLECT BACK QUESTIONS.

USE AUDITORY PREDICATES: HEAR, SAY, TALK, TELL, QUIET, DESCRIBE, CALL, SPEAK, VERBALIZE, LISTEN, HASSLES, OVERHEAR, ETC.

Guidelines for Using the KINESTHETIC Rep. System:

Incorporate the client's own language but use such phrases as:

"Now that I know a little about how you GRASP things, I'd like to GIVE you some information about AIDS."

SUGGEST THAT THE CLIENT MAY WANT TO WRITE DOWN KEY WORDS, PROVIDE PENCIL AND PAPER, ASK THE CLIENT TO POINT TO CORRECT ANSWERS OR FIND INFORMATION AND POINT TO IT ON CHARTS AND GRAPHS.

USE KINESTHETIC PREDICATES: FEEL, POINT, PUSH, REACH, GRAB,

TENSION, CONNECT, MANIPULATE, TAKE, LIFT, SHAPE, EXCITE, CREEPS, ETC.

Guidelines for Using the VISUAL Rep. System:

Incorporate the client's own language but use such phrases as:

"Now that I know a little about how you SEE things, I'd like to

SHOW you some information about AIDS."

USE PAMPHLETS, POSTERS, POINT TO INFORMATION, DRAW YOUR OWN DIAGRAMS.

USE VISUAL PREDICATES: SEE, OBSERVE, VIEW, WITNESS, PERCEIVE, DISCERN, SPY, SIGHT, DISCOVER, NOTICE, DISTINGUISH, RECOGNIZE, IMAGINE, CATCH SIGHT OF, LOOK....etc.

APPENDIX N

Questions for Recalled Clients

1. Please tell me your opinion of the nurse who taught you the AIDS prevention information.
2. Has your opinion changed since the time that the teaching took place. If so, in what way?
3. Can you share with me what you liked or disliked about the nurses presentation. Was there anything else ?
4. Please tell me where you had received information about AIDS prior to that teaching.
5. Do you/ or do you not consider yourself at risk for contracting AIDS ? Please explain your answer.
6. If at risk, how do you plan to protect yourself.

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