PERCEIVED LEARNING NEEDS FOR REHABILITATION FOLLOWING STROKE

A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF MASTER OF SCIENCE

IN THE GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

COLLEGE OF NURSING

BY

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AUGUST 1986

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July 9, 1986
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To the Provost of the Graduate School:

I am submitting herewith a thesis written by

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entitled Perceived Learning Needs for Rehabilitation Following Stroke

I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Nursing.

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We have read this thesis and recommend its acceptance:

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Accepted

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To Dennis, my husband, for his constant support and never-failing belief that I would get finished.

ACKNOWLEDGMENTS

I would like to thank the following people for their help and support with this research:

To my sister, Catherine, for her countless hours of typing and retyping, as well as her willingness to listen to my problems and ideas with this thesis.

To my thesis chairperson, Dr. Sue Goad, for her excellent guidance.

To Dr. Lois Hough and Dr. Sandra Strickland for serving on my committee.

To my daycare provider, Noel, whose expert child-care allowed me the freedom to leave Lauren without worry in order to work on this thesis.

To Marion Smalley for her typing of the "final masterpiece."

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ABSTRACT

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An ex post facto descriptive design was used to study the differences in perceived learning needs for the stroke patient during rehabilitation between rehabilitation team members and stroke patients. The theoretical framework for the study was similar to Donlon's (1983) two theories which were used to develop a tool to assess perceptions of learning needs. One theory was Maslow's (1970) theory of motivation and personality which emphasizes the importance of need satisfaction on an individualized basis and in a hierarchical order. The other theory was Knowles' (1978) theory of adult learning, andragogy, which stresses an individual's readiness to learn and importance of the material to the individual in order for learning to occur.

The instrument used to assess importance of learning needs was Donlon's "Questionnaire for Patients/Nurses." The hypothesis predicting a significant difference in scores on Donlon's questionnaire between rehabilitation team members and stroke patients was supported.

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CHAPTER I

INTRODUCTION

Stroke is a major cause of morbidity and loss of productivity in this country (Hartunian, Smart, & Thompson, 1980). It is estimated that more than 500,000 Americans suffer a cerebrovascular accident (or stroke) each year (Dunn, Nelson, & Peterson, 1984). Of this number, 8 out of 10 persons survive the initial phase (Dunn et al., 1984). These survivors usually experience a deficit in one or more of the following: cognition, memory, speech, motor, and sensation (Dunn et al., 1984). A major goal for these patients is learning to compensate for these deficits through a comprehensive rehabilitation program.

The central goal of rehabilitation is independence and/or improving the patient's ability to function in the activities of daily living. The rehabilitation patient's major task is to learn to overcome, compensate, and adjust in such ways as to attain as nearly as possible an optimum level of functioning (Christopherson, Coulter, & Wolanin, 1974). This means re-education of the patient. Re-education of the patient requires the patient to move from a passive role to an active role (Mahoney, 1980).

The patient must also possess a readiness to learn (Knowles, 1978).

In addition to learning, the stroke patient must be motivated. Motivation is most often measured through observation for desired behavioral changes (Bleiberg & Merbitz, 1983). However, these behavioral changes do not always correspond with the goals of the rehabilitation team (Shontz, 1978). Indeed, the patient is expected to adhere to and appreciate the sound advice and suggestions offered to him/her by the various members of the rehabilitation team (Nelson, 1983). When a patient rebels against treatment by not following the prescribed rehabilitation program, he/she is said to lack motivation (Shontz, 1978).

Given the requirements of learning and motivation for an optimal return to independence (or as much independence as possible) through rehabilitation, it is imperative that the stroke patient be included in planning his/her rehabilitation program. Careful assessment of the stroke patient's hierarchy of learning needs perhaps would lead to appropriate intervention goals. Thus, intervention may lead to a more individualized rehabilitation program so that there can be a correspondence in those needs or goals

that the stroke patient sees as important and those that the rehabilitation team perceives as most important.

Problem Statement

The problem of this study was to determine if there was a difference in perceptions of the hierarchy of learning needs between rehabilitation team members and stroke patients, as measured by Donlon's (1983) "Questionnaire for Patients/Nurses."

Justification of the Problem

Reports in the early 1980s stated that the disabled are already a sizeable minority of the nation's population (Pan, Backer, & Vosh, 1980). There is a push for more involvement of this minority into American society through coordinated programs of rehabilitation (Pan et al., 1980). Moreover, current literature supports the statement that medical rehabilitation will become a larger and more important component of the health care industry (Mullner, Nuzum, & Matthews, 1983).

This predicted involvement with rehabilitation is due to the consumer's increased awareness of rehabilitation's cost-effectiveness and of the growing demand for rehabilitation care (Mullner et al., 1983). Actual evidence of cost-effectiveness of stroke rehabilitation is

very limited. The studies that do exist indicate that the most cost-effective aim is to be able to send the stroke patient home instead of to an institutional facility such as a nursing home (Johnston & Keith, 1983). Other studies which compared a stroke unit with a conventional medical unit found the patients from the stroke unit to be more independent at discharge (Johnston & Keith, 1983). In addition, it has been suggested that the rehabilitated stroke patient may live longer than the nonrehabilitated stroke patient (Johnston & Keith, 1983).

Given the above statements, it is imperative that the rehabilitation program be one which is of greatest benefit to the stroke patient. This means that there must be some correspondence between the patient's goals and those of the rehabilitation team in order for the stroke patient to attain his/her highest level of independence. Only in this way will the rehabilitation program for the stroke patient be truly cost-effective.

Too often in nursing, and in rehabilitation, there exists the phenomenon known as paternalism (Taylor, 1985). Paternalism means that the health care provider makes decisions for the patient on the justification of knowing what is right or best for the patient (Taylor, 1985). In actuality, it has been suggested that the more

a patient is responsible for and in control of his/her health, the better the health outcome (Giese & Davis, 1981). This means that the rehabilitation team, and more importantly the rehabilitation nurse, must be aware of the stroke patient's needs (Giese & Davis, 1981). These needs are highly individualized and are specific to age, personality, and physical and social environment (Giese & Davis, 1981). It is only when these needs have been met that the stroke patient can progress through the rehabilitation process and then focus on achieving a high level of wellness (Giese & Davis, 1981).

Another factor which affects the stroke patient's progress through the rehabilitation program is motivation. In order to achieve the individualized goals discussed previously, the stroke patient must be motivated. Knowles (1978) stated that adults are motivated to learn as they experience needs and interests that learning will satisfy.

All of the above statements point to the necessity of the rehabilitation staff members having a thorough understanding of what the stroke patient perceives as important as a beginning point for an individualized rehabilitation program. The rehabilitation nurse can identify and thoroughly discuss unrealistic goals/

desires/needs that the stroke patient has in order to focus total attention on selected rehabilitation tasks that the patient must accomplish for successful adaptation to his/her current health state. Indeed, forward progression will not occur without the stroke patient's full cooperation with the rehabilitation plan of care. Studying learning needs of stroke patients will help to determine how to provide patients with appropriate and individualized teaching programs based on a hierarchy of needs.

Theoretical Framework

This study is similar to Donlon's (1983) study in which learning needs of spinal cord injury patients were assessed. Donlon developed a tool based on two particular theories. One was Maslow's (1970) theory of motivation and personality. The other theory was by Knowles (1978) and called a theory of adult learning: andragogy.

Maslow (1970) developed a set of five basic needs common to all individuals and arranged in hierarchical order based on the individualized importance of the satisfaction of the needs. The five needs are as follows: (a) physiological, (b) safety and security, (c) belongingness and love, (d) esteem, and (e) self-actualization (Maslow, 1970). The physiological need

includes oxygen, food, fluids, rest and sleep, exercise and activity, elimination of wastes, maintenance of body temperature, and sexual satisfaction. The safety and security need is composed of stability, dependency, shelter, freedom from fear and anxiety, need for structure and limits, and strength in the protector. Within the belongingness and love need is relationships with significant others, desire to be part of a group, the need to give and receive love, and the desire for kindness and consideration in interpersonal relationships. The esteem need encompasses the desire for self-respect, mastery of tasks, competence, and independence. The final need, self-actualization, includes the need to be self-fulfilling and to become everything that one is capable of becoming.

It is important to note that these needs are not necessarily in order of importance for each individual (Maslow, 1970). Though common to all people, these needs differ in that they must be ranked in importance on an individualized basis (Maslow, 1970). Blocking of satisfaction of an individual's needs is threatening to the individual (Maslow, 1970). Indeed, if those needs as ranked by the individual are not met in the order in which the individual perceives them, a person cannot learn

(Maslow, 1970). Rather, this individual is driven to satisfy the needs of primary concern first and all other needs become of secondary concern (Maslow, 1970). When an individual's first or primary need as he/she perceives it is met, other (higher) needs emerge (Maslow, 1970). Stated more simply, the higher-order needs do not emerge until the lower-order needs are met to the individual's personal satisfaction (Maslow, 1970).

The other theory used to support this study was Knowles' (1978) adult learning theory: andragogy. This theory corresponds to Maslow's (1970) theory of motivation in that both agree that adults are motivated to learn as they experience needs and interests that learning will satisfy. These individualized needs and interests are the starting points for organizing adult learning activities (Knowles, 1978).

There are four main assumptions in Knowles' (1978) adult learning theory: andragogy. The first assumption is that there are changes in the adult's self-concept such that as a person matures, he/she moves from a state of total dependency to one of increasing self-directedness. Andragogy assumes that the point at which an individual achieves a self-concept and self-directedness is the point at which he/she is psychologically an adult. When this

develops, the individual develops a deep need to be perceived by others as self-directing. Therefore, if an individual finds himself/herself in a situation in which he/she perceives no control, a state of tension develops due to a threat in his/her self-concept. The individual's reaction contains the elements of resentment and resistance.

The next assumption emphasizes the role of experience in shaping adult learning. As an individual ages, he/she develops a huge reservoir of experience to use as a base in which to relate new learnings. There is decreased emphasis on traditional techniques of learning and an increased emphasis on experimental techniques. The learner must analyze the experience in such a way as to make it meaningful to him/her. Motivation is through the usefulness of the material to be learned.

Thirdly, there must be a readiness to learn on the part of the learner. Timing of learning experiences is very important. The learning experiences must fit into the individual's lifestyle and his/her developmental level.

Fourth, orientation to learning is important as adults tend to enter into the educational process on a problem-centered basis. The adult learner begins new learning to compensate for some problem or inadequacy in

coping with his/her current life problems. He/she wants to directly apply tomorrow what is learned today. The adult's time perspective is one of immediate application.

Motivation as it relates to rehabilitation has been defined as a strong desire on the part of the stroke patient to become independent while faithfully and eagerly following a prescribed rehabilitation program (Hirschberg, Lewis, & Vaughan, 1976). Failing to do so would constitute a lack of motivation (Hirschberg et al., 1976). However, given Maslow's (1970) theory of motivation, it would follow that there are other variables to consider when deciding if a rehabilitation patient is motivated. One must first assess, again on an individualized basis, what the stroke patient is focusing on regarding his/her rehabilitation program. What need, what desire, what ability is the stroke patient most concerned about first, second, third, and so on? Is the rehabilitation staff meeting that patient at his/her current need and knowledge level as a beginning point? These two theories provided a framework for the present study.

Assumptions

The assumptions for this study were as follows:

1. All men and women are created with an innate desire for need satisfaction.

2. Motivation to learn comes from satisfaction of needs arranged in hierarchical order by the individual.

3. The adult is motivated to learn only as he/she identifies the need.

Hypothesis

The hypothesis for this study was as follows: There will be a significant difference in category and item scores on Donlon's (1983) "Questionnaire for Patients/Nurses" between rehabilitation team members and stroke patients.

Definition of Terms

Definitions of terms used in the problem of study were as follows:

1. Perceptions of hierarchy of learning needs --selected behaviors and components of activities of daily living as measured by scores on Donlon's (1983) "Questionnaire for Patients/Nurses."

2. Stroke patient--current inpatients on a rehabilitation unit with a diagnosis of cerebral vascular

accident with either a right or left hemisphere lesion but screened by a speech therapist for ability to comprehend and participate in this study.

3. Rehabilitation team members--registered nurses, physical therapists, and occupational therapists who are licensed to practice in a large southern state and who are employed at the institution chosen for this study.

Limitations

The limitations for this study were as follows:

1. The demographic variables of age, life-experiences, and culture were not controlled for rehabilitation team members or stroke patients.

2. It was not possible to collect data from the stroke patients in the same time frame. Therefore, there may have been some differences in priorities of learning needs in those stroke patients assessed during the first week of their rehabilitation program and those assessed later on in the rehabilitation program.

3. The study was conducted in one institution; therefore, the convenience sample size was small and the results were not generalized.

Summary

This chapter has presented an overview of important components necessary for rehabilitation of the stroke patient including the need for patient as well as rehabilitation staff participation in mutual need satisfaction and/or goal setting. This study attempted to investigate significant differences in learning needs as identified by rehabilitation team members and stroke patients on Donlon's (1983) "Questionnaire for Patients/Nurses." Maslow's (1970) theory of motivation and personality and Knowles' (1978) theory of adult learning: andragogy, were used as the theoretical framework. The data obtained from this study could assist the rehabilitation nurse in planning a comprehensive and individualized stroke rehabilitation program for the stroke patient.

CHAPTER II

REVIEW OF LITERATURE

This chapter includes a review of several factors related to learning, cognition, and motivation for learning with the stroke patient. The first section explains cost-benefit of stroke rehabilitation. Next, the basic physiology related to a diagnosis of stroke including the patient's cognition, perception, and ability to learn are discussed. In addition, the next section examines the stroke patient's readiness to learn. Motivation and behavior in the stroke patient are also discussed. Lastly, this chapter will examine some current teaching methodologies utilized with stroke patients including past research on what patients perceive as most important to learn as opposed to the staff's perception of the patients' learning needs. The chapter concludes with a summary of its content.

Stroke Rehabilitation: Cost-Benefit

In 1983, strokes cost the economy $3.26 billion in direct care costs (Johnston & Keith, 1983). This can be compared with the earlier statement that more than 500,000 Americans suffer a stroke each year (Dunn et al., 1984). Both of these statements point to the fact that strokes

have some kind of impact (either direct or indirect) on the nation's economy as well as on the victims themselves and their families. A current trend is to rehabilitate the stroke patient with the thought that prolonged morbidity can be reduced and the duration of disability can be shortened (Nichols, 1976).

A common attitude among the general public has been that the cost of rehabilitation for a stroke is questionable because stroke patients do not survive long enough to make rehabilitation cost effective (Anderson, Baldridge, & Ettinger, 1979). However, some authors assert that it is not the length of time that a stroke patient survives that determines whether a rehabilitation program is significant (Anderson et al., 1979). Rather, one must consider the quality of life during that period of survival (Anderson et al., 1979). Certain factors which are thought to contribute to quality of life for the stroke patient that can be enhanced by rehabilitation include: independence in self-care, living at home or outside an institution, and involvement in employment, homemaking, or some type of daily activity (Anderson et al., 1979).

Value and dignity of the individual human being are other parameters which must be considered in any

measurement of the effectiveness of stroke rehabilitation (Bitter, 1979). Bitter stated that rehabilitation on an individualized basis can lead to increased self-respect, improved personal, family, and social adjustment. In addition, rehabilitation can assist in the elimination of feelings of despair, frustration, bitterness, and grief (Bitter, 1979). Bitter further stated that a truly effective rehabilitation program that meets the patient's individualized needs can provide meaning for one's altered life.

Rehabilitation does not have to mean achievement of complete independence in all activities of daily living (O'Brien & Pallett, 1978). Instead, each individual attempts to reach his/her maximum potential within his/her physical and mental limitations (O'Brien & Pallett, 1978). According to O'Brien and Pallett, no stroke rehabilitation program is identical for each patient. O'Brien and Pallett also stated that each rehabilitation program must be tailored to the individual patient's abilities, disabilities, and goals.

Geibel and Kubalanza-Sipp (1986) stated that nursing care of the stroke patient must focus on the individual patient's needs and assets and consider the patient's physiological, psychological, and social status. Together

with the other members of the rehabilitation team, nurses assist with rehabilitation to provide stroke patients with skills necessary to survive and function at an optimal level in the outside world (Geibel & Kubalanza-Sipp, 1986). Within this context, patient and rehabilitation team goals are mutually set (Geibel & Kubalanza-Sipp, 1986).

Physiology Related to Cognition and Perception

Stroke and cerebral vascular accident are diagnostic terms used to describe brain lesions (Bleiberg, 1986). There are differences in severity, course, outcome, and specific deficits associated with the brain lesion (Bleiberg, 1986). Rehabilitation of a stroke patient generally involves differentiation into two categories based on where the brain damage occurs and the resulting hemiparesis or hemiplegia (Anderson, 1982).

Right-sided paralysis (or paresis) implies left brain injury (Fowler & Fordyce, 1974). This individual will most likely have speech-language deficits, his/her behavioral style will be slow and cautious, and memory deficits will center around language problems (Fowler & Fordyce, 1974). For the right hemiplegic, learning may best occur with a set-up of the environment and

demonstrations of the tasks to be carried out (Larsen, 1979).

The person with a right brain injury will have left-sided paralysis (or paresis) (Fowler & Fordyce, 1974). This person may have spatial-perceptual deficits, a quick impulsive behavior and memory deficits will be in the area of performance ability (Fowler & Fordyce, 1974). This would mean that an optimal learning situation for the left hemiplegic would be to talk the patient through tasks involving motor planning as these patients usually have good verbal skills (Larsen, 1979).

Because a stroke produces brain damage and rehabilitation is a retraining and relearning process for the patient, a mental status exam is usually performed to assess the patient's learning potential (Stolov, 1982). This exam includes an assessment of the patient's recent memory, perception, affect, and judgment (Stolov, 1982). Recent memory is needed because rehabilitation will require the patient to learn new ways of performing lost activities of daily living skills (Stolov, 1982). Teaching of these activities of daily living requires the patient to assimilate, retain, and reproduce new material not previously learned (Stolov, 1982). With decreased

memory functions, it is necessary to utilize much repetition (Stolov, 1982).

Another area that may be altered after a stroke is a patient's perception of himself/herself and his/her environment (Stolov, 1982). Perception includes a conscious recognition and interpretation of sensory stimuli into information about one's environment and serves as a basis for understanding, learning, knowing, and motivation of an action or reaction (Geibel & Kubalanza-Sipp, 1986; Stolov, 1982). Disturbances in this area deal with interpretation of visual inputs of form, space, and distance (Stolov, 1982). Teaching of activities of daily living for the person with perceptual problems may be better with verbal instruction rather than demonstration (Stolov, 1982).

A stroke may change a person's affect (Stolov, 1982). Reactive depression is common and a healthy response indicative of a patient being able to recognize his/her losses. Emotional lability may occur (Stolov, 1982).

Judgment problems which may occur after a stroke cause the patient to have difficulty monitoring his/her behavior (Stolov, 1982). Because of this, the stroke patient may fail to detect errors and be unaware of

mistakes in manner of dress and/or activities of physical function (Stolov, 1982).

Motivation, Behavior, and Readiness to Learn

Given the previous explanations on how a stroke patient learns and the factors that must be considered in this learning process, it is necessary to briefly review certain factors that can affect outcome of the stroke patient. Most important is the need to view the stroke patient as an individual. This means that the stroke patient needs a comprehensive, planned rehabilitation program with emphasis on his/her own goals (Olson, 1986). Maximizing a stroke patient's redevelopment of abilities is best achieved through a coordinated patient, family, and rehabilitation team effort (Olson, 1986).

Several articles on patient teaching in the literature link learning, learning theory, motivation, and behavior together (Davidson & Young, 1985; Garity, 1985; Myco, 1984; Woody et al., 1984). In addition, other articles on rehabilitating the stroke patient emphasize the statement that any effective rehabilitation program must treat the individual such that what is taught is what the patient perceives as important (Boroch, 1976; Christopherson et al., 1974; Greif & Matarazzo, 1982; Jeffrey, 1981; Kreger & Whealon, 1981; Nichols, 1976).

However, very little research exists that determines what the stroke patient does perceive as necessary for his/her successful rehabilitation and re-entry into society.

Motivation and desire for rehabilitation have often been linked with behavior. A behavior change such as compliance with learning selected activities of daily living skills is usually interpreted as indicative of a motivated stroke patient (Hirschberg et al., 1976). Boroch (1976) further stated that behavior itself is an overt manifestation of an expression of satisfaction of certain perceived covert basic needs. These needs are based on Maslow's (1970) hierarchy of needs.

Motivation can also be described as encompassing three basic principles: value, probability, and situation (Nelson, 1983). Value means focusing on what is important to the patient (Nelson, 1983). Probability is related to fear of failure due to a lack of knowledge, experience, time, and/or support (Nelson, 1983). Situation means that the patient's work environment is important (Nelson, 1983). This would mean that a lack of trust or cooperation from the rehabilitation team with what the patient perceives as important could decrease the patient's motivation (Nelson, 1983).

Wright (1980) described the interaction of the person to his/her environment when he stated that atypical behavior (or noncompliance with the prescribed rehabilitation program) is seen as the patient's problem and not of the environment or the rehabilitation program. Wright (1980) asserted that there is a need for individualized considerations in rehabilitation such that a modification of the patient's environment may be necessary for full rehabilitation to progress.

Donlon (1983) used 24 spinal cord injured patients and 10 rehabilitation nurses from a veterans administration hospital in a study that attempted to classify desired behaviors according to basic needs and use the classification system to predict an individual's motivation to learn specific behaviors. Donlon (1983) felt this would assist rehabilitation programs in structuring learning needs to decrease, if not eliminate, motivational problems. Subsequently, if one's physiological needs were satisfied first, the patient would be motivated to learn more--thus, proceeding to the next basic need.

However, there was a problem with classifying specific behaviors according to basic need satisfaction. Therefore, Donlon (1983) attempted to establish the

existence of a hierarchy of learning needs common to spinal cord injured individuals and to categorize those assessed behaviors according to the learning needs they satisfied. Next, Donlon (1983) used Knowles' (1978) adult learning theory to further explain the importance of need satisfaction as a basis for learning. The basic premise that if the learner does not perceive a behavior as satisfying a present need, he/she will not be motivated to learn that behavior follows from Knowles' (1978) theory. Although Donlon (1983) stated that professional nurses' perceptions of patients' learning needs were congruent with patients' perceptions of their own learning needs, findings included differences in some areas on the questionnaire. In addition, Donlon was able to support the statement that each of the subject groups did perceive a hierarchy of importance for the general categories of learning needs identified on the questionnaire.

Bleiberg and Merbitz (1983) reviewed medical charts of 20 spinal cord injured patients admitted to the Rehabilitation Institute of Chicago for references to teaching/learning activities designed to facilitate behavior and/or behavior change. A classification system was designed for the above purpose. The authors found an average of 65% of total chart entries reflected

teaching/learning and/or attempts by the rehabilitation staff to increase or decrease specific behaviors. According to Knowles (1978), a climate which approves and rewards new behaviors will encourage the maintenance of these desired behaviors.

Heijn and Granger (1974) discussed motivational patterns and their link to rehabilitation. They found that the treatment of many medical/surgical conditions was accomplished with minimal active, cooperative effort by the patient. However, following a disability and subsequent functional loss, treatment required an intensive and prolonged active involvement in programs designed to promote new learning to compensate for loss. This active involvement meant establishing a cooperative relationship with the rehabilitation team. Heijn and Granger (1974) stated that the adult patient must identify the need to learn and that the patient's interests may shift from one area of rehabilitation to another as they perceive an area as necessary to learn.

Dodge (1969) conducted patient interviews from 116 medical-surgical patients at a 172-bed general hospital in New York City to assess patients' perceptions of selected needs. In this study, patients were most concerned about receiving information to assist them in planning for their

immediate and long-range lives. Dodge (1969) concluded that patients are more concerned with being given information that they perceive as important.

Other articles support the statement that learning in the rehabilitation setting is related to the patient's perception of what is important (Gloag, 1985; Perreault, 1985). A patient's perception is related to a pre-established system of attitudes and beliefs which are the result of his/her earlier experiences (Nicholson & Tobaben-Wyssmann, 1984). Motivation to achieve or not is enmeshed in this cumulative background (Nicholson & Tobaben-Wyssmann, 1984). When patients believe they can accomplish a goal, they will be motivated to pursue that goal (Nicholson & Tobaben-Wyssmann, 1984).

The Commission on Accreditation of Rehabilitation Facilities (CARF) specifies that all rehabilitation centers adopt and implement individual rehabilitation plans (Nicholson & Tobaben-Wyssmann, 1984). This means the plan of care must include input from the rehabilitation patient. Given this requirement, it is imperative to know what the patient perceives as important and work from that point to achieve a mutually beneficial rehabilitation program.

Teaching Methods Used With Stroke Patients

Current teaching methods for stroke patients center around developing a comprehensive teaching plan (Geibel & Kubalanza-Sipp, 1986). Steps for achieving this plan include a thorough assessment of the patient's readiness to learn and motivation or desire to learn, educational level, age, attention span and memory, medical condition following the completed stroke, and the patient's beliefs and attitudes toward health and illness (Geibel & Kubalanza-Sipp, 1986). Most important, it is necessary to identify the learning needs of the patient and his/her family (Geibel & Kubalanza-Sipp, 1986). By allowing the stroke patient to make choices and assist in deciding learning needs, the patient becomes an active participant in the rehabilitation process (Halper & Mogil, 1986).

Myco (1984) stated that strategies for motivating the stroke patient are seldom discussed although poorly motivated stroke patients cause problems for the rehabilitation nurse. One way Myco suggested for increased motivation was for the rehabilitation nurse to maintain an objective record of the patient's progress in those activities of daily living the patient felt were most important.

Several articles discuss the importance of mutual goal setting with the rehabilitation patient (Anderson, 1978; Becker, Abrams, & Onder, 1974; Davidson & Young, 1985; Kreger & Whealon, 1981; Mahoney, 1980; Stonningham, 1980). This goal setting involves short and long-term goals and is based on the stroke patient's perception of learning needs. In this way, the stroke patient becomes an active participant in the learning process (Anderson, 1978).

The literature on teaching rehabilitation patients also includes articles on possible problems which may arise when the patient's goals are not fully assessed. According to Davidson and Young (1985), frustration can result when personal goals are not adequately considered. In addition, the patient and family who have been left out of the planning of the learning process for the stroke patient may undermine therapy and not realize the importance of learning activities of daily living skills (Becker et al., 1974). Another potential problem may center around the rehabilitation team trying to return a patient to a physical level of ability which he/she had not been able to practice for several years (Holbrook & Skilbeck, 1983).

Other articles discuss staff perception of required learning needs of patients versus patient perceptions of necessary learning needs as the basis for determining a good teaching program. Lauer, Murphy, and Powers (1982) assessed 33 nurses and 27 cancer patients for perceptions of learning needs of cancer patients on six content areas. They found that nurses and patients did not perceive the same priorities for patient learning. Lauer et al. concluded their study by stating that teaching must focus on learning needs the patient has identified as important and relevant.

Avillion (1985) assessed rehabilitation patients after discharge to determine client-perceived nursing interventions which enhance community reintegration. She found that the patients had trouble defining what the rehabilitation nurse did that assisted the patient in his/her rehabilitation program. One suggestion Avillion had for the rehabilitation nurse was to promote a collaborative relationship in which both the nurse and patient mutually identify goals and health concerns.

Chiou and Burnett (1985) studied the perceived value of 15 activities of daily living skills between 26 stroke patients and 10 therapists. They found that the relative importance of each activity of daily living perceived by

the stroke patients and the therapists group was similar. A suggestion by Chiou and Burnett was that the value stroke patients placed on each activity of daily living could serve as a guide for sequencing learning steps and, thus, aid in determining patient rehabilitation goals.

Summary

This chapter has presented an overview of selected aspects of stroke rehabilitation from pertinent literature. Included in this literature review was a discussion of factors relating learning, cognition, motivation, and methods for teaching with providing an optimal rehabilitation experience for the stroke patient. After examining the related literature, it can be concluded that it is most important for the rehabilitation team, and especially the rehabilitation nurse, to view the patient as an active participant on the health care team.

CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

An ex post facto descriptive design was used for this study. The type of approach for this study was nonexperimental and met the criteria described by Polit and Hungler (1978). Criteria for an ex post facto descriptive design include the inability to manipulate the variables and the nonrandomization of subject selection (Polit & Hungler, 1978).

In the present study, the researcher has made an attempt to identify differences in learning needs as perceived by stroke patients and those needs the rehabilitation team members perceive as most important to stroke patients. Each group completed Donlon's (1983) "Questionnaire for Patients/Nurses." On this questionnaire the participants rated selected learning needs on a 5-point Likert scale according to how important each item was for stroke patients to learn during rehabilitation. These needs were compared between the two groups for similarities as well as differences.

Setting

The setting for this study was a 32 bed rehabilitation unit at a large general hospital in the

southwest. This rehabilitation unit consisted mainly of neurologically impaired patients with diagnoses of stroke, multiple sclerosis, closed head injury, and spinal cord injury. The interview for collection of data on the questionnaire took place in the individual patient's room, which was either private or semi-private.

The explanation and distribution of the questionnaire for the physical and occupational therapists took place in the therapy department during the therapists' weekly staff meeting. The physical therapists and occupational therapists who participated in this study were engaged in inpatient treatment only and were currently treating at least one stroke patient as an inpatient. The explanation and distribution of the questionnaire for the nursing staff took place immediately after shift report in a 48 hour period. All rehabilitation team members were told they could complete the questionnaire at their leisure and return the questionnaire to the researcher's mailbox within 1 week.

Population and Sample

The population for this study consisted of 11 stroke patients and 22 rehabilitation team members. The stroke patients chosen for inclusion in this study were current inpatients with a diagnosis of cerebral vascular accident

with a resulting right or left hemiparesis (or hemiplegia). They were assessed for ability to comprehend and participate in filling out the questionnaire by a qualified speech-language pathologist.

The rehabilitation team members were registered nurses, physical therapists, and occupational therapists who have and presently work with stroke patients and who consented to fill out the questionnaire form. The registered nurses were currently employed on the rehabilitation unit on all three shifts (day, evening, or night). All rehabilitation team members were employed at the institution chosen for this study for at least 6 months prior to this study. This type population is classified as an accessible population where subjects selected for this study conform to certain specified criteria and are accessible to the researcher for study (Polit & Hungler, 1978).

The sampling approach utilized for this study was a nonprobability approach with accidental sampling technique according to the definition of such by Polit and Hungler (1978). This type of sampling is a convenience sample and occurs when subjects self-select themselves or volunteer to participate by answering the questionnaire.

Protection of Human Rights

This study utilized an anonymous questionnaire and, therefore, subsided within the guidelines of Category I (no risk) of the Federal Report. Agency permission was obtained. Approval was also obtained from the graduate school of Texas Woman's University prior to initiation of this study.

An oral explanation was given to all subjects. The oral explanation was presented separately and in a slightly different format to the stroke patient (Appendix A) than to the rehabilitation team members (Appendix B). This was necessary because the questionnaire had two parts--a part for the stroke patients (Appendix C) and a part for the rehabilitation team members (Appendix D). The explanation included the purpose of the study, instructions for completing the questionnaire, benefits and risks of the study, the right for the participant to withdraw from the study at any time, and the fact that refusal to participate in this study would not affect the patients' care or the rehabilitation team members' employment. In addition, the participant was told the estimated amount of time it would take to complete the questionnaire, how to obtain results of this study when completed, and that anonymity would be maintained. The

following statement was typed across the top of each page of the questionnaire: RETURN OF THIS QUESTIONNAIRE WILL BE CONSTRUED AS INFORMED CONSENT.

The rehabilitation team members were requested to return the questionnaire to the researcher's mailbox within 1 week. All questionnaire results were reported as group data.

Instrument

The data for this research study was collected using Donlon's (1983) "Questionnaire for Patients/Nurses." This questionnaire had two forms. The first form was utilized with the stroke patients (Appendix C). The second form was used with the rehabilitation team members (Appendix D). Permission to use this tool in a slightly modified form for use with stroke patients in a rehabilitation program was obtained from the author (Appendix E). The modifications are listed below. The instrument has been titled. The word stroke has been substituted for injury. There is an addition to the following statements: feeding myself, getting into/out of bed/chair, getting up from the floor, speaking, and using a communication board. The following statements have been deleted: driving a vehicle, preventing muscle spasms, typing, using a tape recorder, and finding out about school. The questionnaire

was designed to elicit both the stroke patients' and the rehabilitation team members' perceptions of the importance of selected learning activities.

The first section on each questionnaire contained demographic data of the subjects participating in this study. Included in this section for the stroke patient were: age, sex, and ability to comprehend and participate in filling out the questionnaire. Demographic data for the rehabilitation team members included: age, sex, whether or not the subject had worked with stroke patients at least 6 months, and the title of the professional completing the questionnaire. Collecting data on age and sex were necessary for describing the sample. The rest of the demographic data were necessary to insure that persons utilized in this study met the criteria of subjects for population and sample.

The next section of the questionnaire consisted of a list of 47 selected behaviors and components of activities of daily living arranged under 9 categories included in most rehabilitation programs. The subjects were asked to rate each item on a 5-point Likert scale. The Likert scale consisted of five declarative statements which expressed a viewpoint from "no importance" to "extreme importance," according to how important it was for the

stroke patient to learn the activity during rehabilitation (Appendix F). A score of 5 was indicative of the subject indicating extreme importance for learning a particular rehabilitation task while a score of 1 meant the subject felt there was no importance in learning a particular rehabilitation task/activity.

Validity

Validity of the instrument was obtained initially by Donlon (1983) through a panel of experts. The questionnaire was then utilized in the author's own study with spinal cord injured patients in a rehabilitation setting (Donlon, 1983). The author obtained statistically significant differences among scores in several areas.

Reliability

Reliability for this study is not known. The author did not establish reliability of the instrument prior to the author's study.

Data Collection

Approval to conduct this proposed research study was obtained from the graduate school (Appendix G), from the institution through which the study was conducted (Appendix H), and from the Research Review Committee

(Appendix I). After approvals were obtained, data collection began.

A list of all hospitalized stroke patients on the rehabilitation unit was obtained from the Physical Medicine and Rehabilitation Medical Director. This list was given to the speech therapist who screened each subject for ability to comprehend questionnaire material and, thus, participate in the study.

Occupational and physical therapists' names were obtained from the Director of the Therapy Department. All therapists who were currently engaged in treating hospitalized stroke patients on the rehabilitation unit were asked to participate in the study.

A complete listing of all registered nurses currently employed as regular staff members on the rehabilitation unit was obtained from the Nursing Service Unit Director for the rehabilitation unit. Each of these participants was screened for length of employment and those nurses with less than 6 months employment on the rehabilitation unit were not used for this study.

After the speech therapist screened each potential subject from the stroke population, the researcher proceeded to each patient's room to elicit participation in the study. The researcher began the data collection

with an oral explanation of the study. If the patient agreed to participate in the study, the questionnaire was read aloud item by item to each subject. The stroke patient had a 5" x 7" index card with an explanation of the numbers to be selected in front of him/her during the whole questionnaire completion to assist his/her memory in selecting the appropriate response (Appendix F). The subject was asked to point to the selection which best represented how important the item was for him/her to learn during rehabilitation. The researcher continued to collect data until 11 subjects were obtained from the stroke patient population.

An oral explanation of the study was given to the occupational and physical therapists in a group format immediately preceding a weekly staff meeting. Afterwards, the questionnaire was distributed to each therapist present at the meeting. The therapists were instructed to return the completed questionnaire within 1 week to the researcher's mailbox. Registered nurses received the same oral explanations as the therapists immediately preceding report. The questionnaires were then distributed to the registered nurses. The participants were requested to return the completed questionnaires to the researcher's mailbox within 1 week. The researcher continued to

collect data until 22 subjects were obtained from the rehabilitation team members (registered nurses, occupational therapists, and physical therapists).

Treatment of Data

The responses to each question were numerically coded and grouped by respondent category--stroke patients and rehabilitation team members. The rehabilitation team members were further divided into rehabilitation nurses, occupational therapists, and physical therapists.

The demographic data were discussed using descriptive statistics. Age and sex were described with mean and frequency.

Mean and standard deviation were calculated for each question within the matched response group of stroke patients and rehabilitation team members. The same calculation was performed for each category of learning needs for this matched response group.

An F value was used to determine the significance of the variability of the scores in one grouped pair compared with the variability of the scores in the other grouped pair. This was computed for each question and the general categories of learning needs. If no significant difference was detected, the pooled variance estimate was used. When a significant difference between variability

of scores among the grouped pairs was found, the separate variance estimate was used. Significance was determined at the .05 level. Analysis of data was performed on the Texas Woman's University computer. All data were displayed on tables.

CHAPTER IV

ANALYSIS OF DATA

This descriptive study was performed to determine if there was a difference in perceptions of learning needs between rehabilitation team members and stroke patients, as measured by Donlon's (1983) "Questionnaire for Patients/Nurses." Demographic data summary and sampling techniques are presented followed by the results of the study.

Description of Sample

The subjects for this study were all volunteers from an accessible population at a large hospital in the southwest. Participants in this study were stroke patients (n = 11) and rehabilitation team members (n = 22). Rehabilitation team members were further divided into rehabilitation nurses (n = 8), occupational therapists (n = 8), and physical therapists (n = 6).

Demographic data gathered on the questionnaires included age and sex for each group. The age range for the rehabilitation team members (n = 22) was 22 years through 50 years with the mean age of 29.59. Five percent

of the rehabilitation team members were male and 95% were female. Within the stroke patient population (n = 11), 46% were male and 54% were female. Ages for the stroke patient population were reported in ranges as follows: 18% in the 40-50 year range, 18% in the 50-60 year range, 46% in the 60-70 year range, and 18% in the 70-80 year range.

Findings

The research hypothesis predicted that there would be a significant difference in category and item scores on Donlon's (1983) "Questionnaire for Patients/Nurses" between rehabilitation team members and stroke patients. Three categories of learning needs were found to have significantly different mean ratings between stroke patients' perceptions of their learning needs and rehabilitation team members' perceptions of the stroke patients' learning needs. Table 1 displays the three general categories that were statistically significant. The three general categories were "communication," "financial," and "resources."

Among the individual learning needs listed under the general categories of learning needs, several items were found to be statistically significant. Table 2 lists each learning need under the general category of

Table 1

A Comparison of Mean Ratings for Importance of General Categories of Learning Needs Between Rehabilitation Team Members and Stroke Patients

Category	Rehab Team Members (n = 22)		Stroke Patients (n = 11)		t-value	two-tailed probability
	Mean	SD	Mean	SD		
Personal care	4.45	.69	4.65	.46	.89	.380
Medical information	4.00	.79	4.44	.62	1.61	.118
Mobility	4.26	.64	4.30	.46	.18	.859
Prevention of complications	4.32	.71	4.12	.70	-.77	.433
Interpersonal relationships	4.05	.68	3.74	.71	-1.07	.292
Communication	4.05	.78	3.39	.56	-2.49	.018*
Financial	4.06	.76	3.24	.95	-2.70	.011*
Recreation	4.16	.79	3.73	.75	-1.50	.144
Resources	4.05	.71	3.34	.90	-2.45	.020*

*Significant at .05 level.

Table 2

A Comparison of Mean Ratings for Importance of Items Pertaining to Learning Needs Between Rehabilitation Team Members and Stroke Patients

Variable	Rehab Team Members (n = 22) Mean	SD	Stroke Patients (n = 11) Mean	SD	t-value	two-tailed probability
Personal Care						
Feeding	4.60	.73	4.45	.69	-0.51	.611
Grooming	4.54	.60	4.55	.69	.00	1.000
Skin care	4.37	.95	4.55	.93	.52	.607
Dressing	4.36	.66	4.73	.47	1.63	.113
Bowel care	4.41	.91	4.73	.65	1.03	.309
Bladder care	4.41	.91	4.91	.30	2.34	.027*
Medical Information						
Diagnosis	4.05	.90	4.45	1.03	1.17	.250

(table continues)

Variable	Rehab Team Members (n = 22) Mean	SD	Stroke Patients (n = 11) Mean	SD	t-value	two-tailed probability
Medical care	4.00	1.02	4.36	1.29	.88	.384
Names of procedures	3.77	.87	4.09	.94	.96	.343
Purpose of procedures	4.05	.79	4.45	.69	1.47	.152
Medications	4.14	.99	4.55	.69	1.23	.229
Prognosis	4.00	1.07	4.73	.47	2.71	.011*
Mobility						
Walk/stand	4.27	.77	4.91	.30	3.40	.002*
Wheelchair use	4.41	1.10	3.45	1.51	-2.08	.046*
Stair use	3.73	.77	4.27	.91	1.81	.079
Transfer to motor vehicle	4.14	.71	4.45	.82	1.15	.258
Getting through doorways	4.36	.79	3.82	1.54	-1.11	.289

(table continues)

Variable	Rehab Team Members (n = 22) Mean	SD	Stroke Patients (n = 11) Mean	SD	t-value	two-tailed probability
Getting into/out of bed/chair	4.64	.90	4.64	.51	.00	1.000
Getting up from floor	4.27	.70	4.55	.82	.99	.328
Prevention of Complications						
Diet	3.73	.83	4.27	.79	1.81	.079
Exercises to strengthen	4.36	.79	4.55	.69	.65	.521
Exercises to loosen	4.45	.67	4.55	.69	.36	.718
Body positioning	4.50	.86	4.36	.92	-0.42	.678
Pain management	4.23	.81	2.73	1.68	-2.80	.016*
Prevention of pressure sores	4.46	.90	3.91	1.22	-1.94	.062

(table continues)

Variable	Rehab Team Members (n = 22) Mean	SD	Stroke Patients (n = 11) Mean	SD	t-value	two-tailed probability
Symptom of illness	4.36	.95	4.45	.93	.26	.797
Interpersonal Relationships						
Maintain relations with family/ friends	4.27	.88	4.64	.92	1.10	.280
Talking about disability	4.05	.84	4.45	1.04	1.22	.233
Change of roles	4.27	.89	3.09	1.76	-2.10	.056
Involving family/ friends in care	4.09	.92	4.00	.89	-0.27	.789
Sexual activity	4.09	.92	2.82	1.83	-2.17	.050*
Meeting new people	3.50	.80	3.45	1.51	-0.09	.927
Communication						
Speaking	4.27	.88	3.82	1.54	-0.91	.380

(table continues)

Variable	Rehab Team Members (n = 22) Mean	SD	Stroke Patients (n = 11) Mean	SD	t-value	two-tailed probability
Using the telephone	4.05	1.13	4.18	.75	.36	.721
Writing	3.68	.84	4.18	1.08	1.47	.152
Using a communication board	4.18	.91	1.36	.92	-8.36	.000*
Financial						
Insurance	3.82	.91	4.36	.81	1.69	.102
Financial assistance	4.22	.87	3.45	1.44	-1.64	.124
Maintain financial security	4.13	.94	3.73	1.35	-1.02	.317
Ability to work	4.09	.87	2.91	1.92	-1.94	.076
Employment	4.05	.90	1.73	1.01	-6.71	.000*

(table continues)

Variable	Rehab Team Members (n = 22) Mean	SD	Stroke Patients (n = 11) Mean	SD	t-value	two-tailed probability
Recreation						
Participating in activities enjoyed prior to stroke	4.09	.81	3.82	.98	-0.85	.402
New activities	4.23	.87	3.64	.81	-1.88	.069
Resources						
Equipment	4.05	.84	3.55	1.04	-1.49	.147
Home care	4.23	.75	3.45	1.37	-1.75	.104
How others deal with similar problems	3.77	.92	3.64	1.03	-0.39	.702
Support groups (Stroke Club)	1.14	.89	2.73	1.56	-2.79	.015*

*Significant at .05 level.

learning needs and displays the results. Stroke patients rated learning about "bladder care," their "prognosis," and "walking and/or standing" higher than did the rehabilitation team members. Rehabilitation team members rated "wheelchair use," "pain management," resuming "sexual activity," "using a communication board," interest in "employment," and participation in "support groups" as significantly more important for a stroke patient to learn during rehabilitation than did the stroke patients.

Table 3 displays a rank ordering by mean ratings for general categories of learning needs between rehabilitation team members and stroke patients. A hierarchical order has been established for both subject groups and is indicated by the numbers in parentheses.

Additional Findings

Additional findings have been generated from a further division of rehabilitation team members into rehabilitation nurses, occupational therapists, and physical therapists. Mean and standard deviation were calculated for each question within the following three pairs of responses: (a) stroke patients and rehabilitation nurses, (b) stroke patients and occupational therapists, and (c) stroke patients and physical therapists. The results are presented and summarized in Table 4.

Table 3

Rank Ordering by Mean Ratings for Importance of General Categories of Learning Needs Between Rehabilitation Team Members and Stroke Patients

	Stroke patients (n = 11	Rehabilitation team members (n = 22)
	Mean*	
Personal care	4.65 (1)	4.45 (1)
Medical information	4.44 (2)	4.00 (9)
Mobility	4.30 (3)	4.26 (3)
Prevention of complications	4.12 (4)	4.32 (2)
lnterpersonal relationships	3.74 (5)	4.05 (6)
Communication	3.39 (7)	4.05 (6)
Financial	3.24 (9)	4.06 (5)
Recreation	3.73 (6)	4.16 (4)
Resources	3.34 (8)	4.05 (6)

*Numbers in parentheses indicate the rank order.

Table 4

A Summary of Significant Findings for General Categories of Learning Needs and Items Pertaining to Learning Needs Among Stroke Patients, Rehabilitation Nurses, Occupational Therapists, and Physical Therapists

General Categories			
Stroke patients (n = 11)	Rehabilitation nurses (n = 8)	Occupational therapists (n = 8)	Physical therapists (n = 6)
Medical information		Prevention of complications	Communication
		Communication	
		Financial	
		Recreation	
		Resources	
Variables			
Dressing	Pain management	Wheelchair use	Communication board
Prognosis	Sexual activity	Pain management	Support groups
Walking/standing	Communication board	Preventing pressure sores	
Stair use	Employment	Change of roles	
Diet		Sexual activity	
Insurance		Communication board	
		Financial assistance	
		Ability to work	
		Employment	
		New activities	
		Support	

There were no significant differences on scores from the general categories of learning needs between rehabilitation nurses and stroke patients. However, several significant differences were noted on an item-by-item analysis of learning needs between stroke patients and rehabilitation nurses. Stroke patients selected "dressing," knowing about their medical "prognosis," "walking and/or standing," "stair use," "diet," and information on "insurance" more important as learning needs than did the rehabilitation nurses. Conversely, the rehabilitation nurses felt that "pain management," "sexual activity," "using a communication board," and "employment" were more important learning needs.

Occupational therapists rated "prevention of complications," "communication," "financial concerns," "recreation," and need for "resources" higher as learning needs than did the stroke patients on the general categories of learning needs. Significant differences that were noted between occupational therapists and stroke patients on perceptions of stroke patients' learning needs on an item-by-item basis are listed below.

Occupational therapists rated "wheelchair use," "pain management," "preventing pressure sores," "change of roles," "sexual activity," "using a communication board,"

"financial assistance," information, "ability to work," "employment," interest in "new activities," and "support groups" as having a higher priority as learning needs than did the stroke patients.

On the general categories of learning needs, physical therapists rated "communication" as a higher learning need while stroke patients felt the need for adequate "medical information" was more important as a learning need. Significant differences on item-by-item learning needs between physical therapists and stroke patients were noted. Stroke patients felt a greater need for "dressing" themselves than did physical therapists. Physical therapists selected "using a communication board," "employment," and need for "support groups" as higher learning needs than did stroke patients.

Reliability for this study was calculated after collection of data through Cronbach's alpha method. Alpha was found to be at 0.95 level.

Summary of Findings

Findings of the study were summarized as follows. Eleven stroke patients and 22 rehabilitation team members completed the requirements for participation in this study. The statistical analysis led to acceptance of the hypothesis at $< .05$ level of significance. Additional

findings were also statistically analyzed after a further division of rehabilitation team members into rehabilitation nurses, occupational therapists, and physical therapists. These additional findings led to acceptance of the hypothesis at the .05 level of significance. After collection of data, Cronbach's alpha method calculated reliability and found alpha at the 0.95 level.

CHAPTER V

SUMMARY OF THE STUDY

This research study was conducted to determine if there was a significant difference in perceptions of learning needs between rehabilitation team members and stroke patients as measured by Donlon's (1983) "Questionnaire for Patients/Nurses." This chapter includes a synopsis of the study, a discussion of the findings, and conclusions and implications for rehabilitation of the stroke patient. Recommendations for future study are also presented.

Summary

This study was descriptive and designed to determine if rehabilitation team members' (rehabilitation nurses, occupational therapists, and physical therapists) perceptions of stroke patients' learning needs were different from stroke patients' perceptions of their learning needs. In addition, this study was a replication of a previous study which assessed learning needs of spinal cord injured patients. The theoretical framework for both studies originated from Donlon (1983). Both studies used Maslow's (1970) theory of motivation and

satisfaction of needs based on a person's personal hierarchy and Knowles' (1978) theory of adult learning which stresses readiness and importance of individual need satisfaction for learning to occur.

The setting for this study took place in a large southwestern area hospital in a large metropolitan area. The sample consisted of stroke patients (n = 11) and rehabilitation team members (n = 22). All stroke patients participating in the study were screened for ability to comprehend and answer the questionnaire by a speech-language pathologist. Rehabilitation team members who agreed to participate in the study were currently working with stroke patients and had been for the past 6 months.

The tool utilized for this study was a questionnaire and was obtained from Donlon (1983). It was slightly modified for use with stroke patients per the author's permission and entitled Donlon's "Questionnaire for Patients/Nurses." After collection of data, Cronbach's alpha method was used to enhance reliability. Alpha was found to be at 0.95 level.

Descriptive statistics were used to describe the population. Mean and standard deviation were calculated for each general learning need category and for an

item-by-item analysis of single learning needs under the general categories among the matched respondent groups. An *F* value was used to determine the statistical significance of the variability of the scores among the grouped pairs of respondents. Either pooled or separate variance estimate was used to report data depending on nonsignificance or significance of scores obtained from each respondent group.

The hypothesis was tested and accepted. A significant difference in scores on Donlon's (1983) "Questionnaire for Patients/Nurses" between rehabilitation team members and stroke patients was found. Common differences obtained that were statistically significant included "communication," "financial concerns," "recreation," "resources," "employment," "sexual activity," and "pain management" as selections of priorities of learning needs for the stroke patient as identified by rehabilitation nurses, occupational therapists, and physical therapists. Stroke patients identified learning about their "medical prognosis," "medical information," "walking and/or standing," "bladder care," and "dressing" as higher priorities of learning needs than did the various rehabilitation team members.

Discussion of Findings

The findings of this study suggested there was a significant difference in perceptions of importance of selected learning needs for the stroke patient in a rehabilitation program between stroke patients and rehabilitation team members. In addition, a hierarchical order of perceived learning needs was generated between rehabilitation team members and stroke patients. The findings of this study would assist in identifying some of the learning needs the stroke patient felt were most important for him/her in a rehabilitation program. Focusing on the stroke patient's hierarchy of learning needs could assist the rehabilitation team member in planning appropriate and timely teaching sessions. Following is a discussion of the findings of the present study as they relate to selected literature themes reviewed in Chapter II. In addition, possible explanations for the findings are discussed.

A theme that has remained constant throughout this study and which can be seen to follow from the results of the present study is the importance of the stroke patient's input on his/her learning needs at some point during the rehabilitation program. Optimally, this point would be fairly early in the rehabilitation experience and

would attempt to incorporate the goals of the stroke patient, his/her family, and the rehabilitation team (Kreger & Whealon, 1981).

As the present study has demonstrated, it is important for the rehabilitation team to know what the stroke patient perceives, or thinks he/she perceives as learning needs. Results from this study indicated that the stroke patient does not always view his/her learning needs as being of the same importance as the ones that are identified by the rehabilitation team. This would suggest giving the stroke patient the responsibility to identify his/her own health care needs with assistance and/or guidance from the rehabilitation team (Zawacki & Patterson, 1984).

Given the above discussion, the teaching plan for the stroke patient during rehabilitation would follow from the patient's identified learning needs. Maslow's (1970) and Knowles' (1978) theories support this statement. In this way, the rehabilitation team would be providing an optimal, as well as motivating, learning environment. This, in turn, would lead to an environment conducive to high satisfaction of stroke patients' learning needs during rehabilitation (Donlon, 1983). In addition, assessment of learning needs on a hierarchical basis would

lead to prediction of patient readiness to learn and would allow the nurse (or rehabilitation team) to organize the teaching in a way to meet an individual's most important needs first (Donlon, 1983).

Other studies discussed previously in Chapter II support the need to include the patient's perception of his/her learning needs as the basis for beginning a teaching program (Dodge, 1969; Gloag, 1985; Perreault, 1985). In addition, other articles discussed differences in staff perceptions of patient's learning needs versus those learning needs the patient identified as most important (Chiou & Burnett, 1985; Laurer et al., 1985).

Upon inspection of the tables, it is important to note that both the rehabilitation team members and the stroke patients chose high ratings (a score of 4 or 5 on the Likert scale) for a great many of the individual learning needs presented. This may be interpreted as indicative of both groups realizing the large amount of information that the stroke patient needs to learn in a comprehensive rehabilitation program. Again, since the stroke patient does realize the importance of information needed, perhaps the learning would occur best in a sequencing order according to a hierarchy shaped by the

stroke patient. These findings again supported Donlon's (1983) study.

The statistical difference in the perception of communication as a need for rehabilitation may have resulted due to the population group itself. Because all except two participants from the stroke population were nonaphasic, the importance of communication might be considered low on the list of necessary learning needs as identified by the stroke patient. Reasons for statistical differences in other areas cannot be explained by the present researcher except to refer back to the limitations presented earlier in this study. It is especially important to note that there may have been some differences in priorities of learning needs in stroke patients assessed during the first week of their rehabilitation program and those assessed later on in the rehabilitation program.

Conclusions and Implications

The conclusions listed below are derived from the findings of the present study:

1. It is possible to elicit importance of selected learning needs in a rehabilitation program from stroke patients.

2. Stroke patients and rehabilitation team members may perceive learning needs differently.

3. It is possible to rank stroke patients' learning needs on a hierarchical basis.

An implication of this study is that rehabilitation team members need to become aware of the learning needs as perceived by the stroke patient. This is especially important for the primary rehabilitation nurse as she/he has the responsibility of coordinating the stroke patient's rehabilitation plan of care. Indeed, for rehabilitation to be a learning process, the learner must be an active participant (Mahoney, 1980). Individualized treatment plans incorporating mutually agreed upon goals are necessary for an optimal learning experience (Greif & Matarazzo, 1982).

Recommendations for Further Study

The following recommendations for further research are suggested:

1. Repeat this study controlling for length of time of hospital stay prior to assessment of priorities of learning needs.

2. Replicate this study using a different population of stroke patients or spinal cord injured patients in a different setting such as a hospital or home setting.

3. Develop a comparative study designed to assess early admission perceptions of goals in a rehabilitation program with perceptions of goals after completion of the rehabilitation program.

4. Develop a methodological study designed to improve scoring of the instrument used for this study.

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APPENDIX A

Explanation to Stroke Patients

Oral Explanation to Stroke Patients

My name is June Stanley. I am a graduate nursing student a Texas Woman's University. I would like for you to fill out a questionnaire on items that you think are important for you to learn during your rehabilitation program.

I will go over each item with you. After each item is listed, you will choose a number from 1 to 5 according to how important the item is to you. The meaning of the numbers will be listed on a card. Please point to the number that you think indicates how important an item is for you to learn.

There are no risks in filling out this questionnaire. This questionnaire may help you to think about learning needs you may not have considered. Filling out this questionnaire will not change your care. You may withdraw from this study at any time. Anonymity will be maintained. This questionnaire will take about 30 minutes to complete. You may obtain results of this study through the nursing office of this hospital.

Sincerely,

June Stanley, RN

APPENDIX B

Oral Explanation to Rehabilitation Team Members

Oral Explanation to Rehabilitation Team Members

My name is June Stanley. I am a graduate nursing student at Texas Woman's University. I would like for you to fill out the enclosed questionnaire on learning needs of the stroke patient in a rehabilitation program. Instructions for completing the questionnaire are after the demographic data.

There are no identified risks from filling out this questionnaire. Possible benefits include an increased awareness of rehabilitation activities and with this increased awareness, a way to assess your patient's individualized learning needs. You have the right to withdraw from this study at any time and this study in no way affects your employment status. The estimated amount of time needed to complete this tool is approximately 15 minutes. Anonymity will be maintained. Results from this study may be obtained from the nursing service office.

Please return the completed questionnaire to my mailbox on West Four West within 1 week. Thank you for your cooperation.

Sincerely,

June Stanley, RN

APPENDIX C

Tool for Stroke Patients

RETURN OF THIS QUESTIONNAIRE WILL BE CONSTRUED AS INFORMED CONSENT

DONLON'S "QUESTIONNAIRE FOR PATIENTS"

PLEASE ANSWER THE FOLLOWING QUESTIONS:

1. Age: 40-50__ 50-60__ 60-70__ 70-80__

2. Sex: M__ F__

3. Ability to comprehend and participate in filling out questionnaire: yes__ no__

PLEASE RATE EACH OF THE FOLLOWING ITEMS ACCORDING TO HOW IMPORTANT IT IS FOR YOU TO LEARN IN THIS REHABILITATION PROGRAM. USE THE KEY ON THE INDEX CARD I HAVE JUST GIVEN YOU.

Personal Care

1.	feeding myself	1	2	3	4	5
2.	grooming- (bathing, shaving, comb/brush hair, brush teeth)	1	2	3	4	5
3.	taking care of your skin on your affected (weaker) side (arm and leg)	1	2	3	4	5
4.	getting dressed and undressed	1	2	3	4	5
5.	taking care of your bowels	1	2	3	4	5
6.	taking care of your bladder	1	2	3	4	5

Medical Information

7.	your exact diagnosis and what it means	1	2	3	4	5
8.	special medical care you may need	1	2	3	4	5

RETURN OF THIS QUESTIONNAIRE WILL BE CONSTRUED AS INFORMED CONSENT

9.	names of procedures or tests you will have done	1	2	3	4	5
10.	purposes of procedures or tests you will have done	1	2	3	4	5
11.	the purposes and side effects of your medicines	1	2	3	4	5
12.	the expected outcome of your stroke	1	2	3	4	5
	Mobility					
13.	how to walk/stand	1	2	3	4	5
14.	how to get around in a wheelchair	1	2	3	4	5
15.	getting up and down stairs	1	2	3	4	5
16.	getting in/out of a car or bus	1	2	3	4	5
17.	getting through doors	1	2	3	4	5
18.	getting into and out of bed and chair	1	2	3	4	5
19.	getting up from the floor	1	2	3	4	5
	Prevention of Complications					
20.	how to change your diet to keep your body healthy	1	2	3	4	5
21.	exercises to strengthen the muscles you can use	1	2	3	4	5

RETURN OF THIS QUESTIONNAIRE WILL BE CONSTRUED AS INFORMED CONSENT

22.	exercises to keep your arms and legs loose	1	2	3	4	5
23.	positioning your body properly in bed or chair	1	2	3	4	5
24.	how to manage pain	1	2	3	4	5
25.	how to prevent pressure sores	1	2	3	4	5
26.	symptoms that may mean you are sick	1	2	3	4	5
	Interpersonal Relationships					
27.	how to maintain relationships with family and friends	1	2	3	4	5
28.	how to talk with family and friends about your disability	1	2	3	4	5
29.	reorganization (or change) of roles within your family	1	2	3	4	5
30.	involving family/friends in your care	1	2	3	4	5
31.	sexual activity	1	2	3	4	5
32.	how to meet new people	1	2	3	4	5
	Communication					
33.	speaking	1	2	3	4	5
34.	using the telephone	1	2	3	4	5
35.	writing	1	2	3	4	5

RETURN OF THIS QUESTIONNAIRE WILL BE CONSTRUED AS INFORMED CONSENT

36.	using a communication board from speech therapy	1	2	3	4	5
	Financial					
37.	what expenses are covered by your insurance	1	2	3	4	5
38.	types of financial assistance available	1	2	3	4	5
39.	how to maintain financial security	1	2	3	4	5
40.	if and how much you will be able to work	1	2	3	4	5
41.	finding out about jobs	1	2	3	4	5
	Recreation and Leisure					
42.	ways to participate in activities you enjoyed before your stroke	1	2	3	4	5
43.	new ways to enjoy your leisure time	1	2	3	4	5
	Resources					
44.	how to get special equipment when you go home	1	2	3	4	5
45.	how to arrange for someone to care for you at home	1	2	3	4	5

RETURN OF THIS QUESTIONNAIRE WILL BE CONSTRUED AS INFORMED CONSENT

46.	how other people with strokes have dealt with problems	1	2	3	4	5
47.	available organized groups of people with strokes (stroke club)	1	2	3	4	5

APPENDIX D

Tool for Rehabilitation Team Members

RETURN OF THIS QUESTIONNAIRE WILL BE CONSTRUED AS INFORMED CONSENT

DONLON'S "QUESTIONNAIRE FOR NURSES"

PLEASE ANSWER THE FOLLOWING QUESTIONS:

1. Age: __
2. Sex: M__ F__
3. Have you worked with stroke patients at least 6 months? yes__ no__
4. Check profession: RN__ PT__ OT__

PLEASE RATE EACH OF THE FOLLOWING ITEMS ACCORDING TO HOW IMPORTANT IT IS FOR THE STROKE PATIENT TO LEARN IN THIS REHABILITATION PROGRAM. USE THE KEY BELOW:

1 = there is NO IMPORTANCE in learning it

2 = there is VERY LITTLE IMPORTANCE in learning it

3 = there is SOME IMPORTANCE in learning it

4 = there is MUCH IMPORTANCE in learning it

5 = there is EXTREME IMPORTANCE in learning it

Personal Care

1.	feeding	1	2	3	4	5
2.	grooming- (bathing, shaving, comb/brush hair, brush teeth)	1	2	3	4	5
3.	taking care of his/her skin on affected side	1	2	3	4	5
4.	getting dressed and undressed	1	2	3	4	5
5.	taking care of his/her bowels	1	2	3	4	5
6.	taking care of his/her bladder	1	2	3	4	5

RETURN OF THIS QUESTIONNAIRE WILL BE CONSTRUED AS INFORMED CONSENT

Medical Information

7.	his/her exact diagnosis and what it means	1	2	3	4	5
8.	special medical care he/she may need	1	2	3	4	5
9.	names of procedures or tests he/she will have done	1	2	3	4	5
10.	purposes of procedures or tests he/she will have done	1	2	3	4	5
11.	the purposes and side effects of his/her medicines	1	2	3	4	5
12.	the expected outcome of his/her stroke	1	2	3	4	5

Mobility

13.	how to walk/stand	1	2	3	4	5
14.	how to get around in a wheelchair	1	2	3	4	5
15.	getting up and down stairs	1	2	3	4	5
16.	getting in/out of a car or bus	1	2	3	4	5
17.	getting through doors	1	2	3	4	5
18.	getting into and out of bed and chair	1	2	3	4	5
19.	getting up from the floor	1	2	3	4	5

RETURN OF THIS QUESTIONNAIRE WILL BE CONSTRUED AS INFORMED CONSENT

Prevention of Complications

20.	how to change his/her diet to keep his/her body healthy	1	2	3	4	5
21.	exercises to strengthen the muscles he/she can use	1	2	3	4	5
22.	exercises to keep his/her arms and legs loose	1	2	3	4	5
23.	positioning his/her body properly in bed or chair	1	2	3	4	5
24.	how to manage pain	1	2	3	4	5
25.	how to prevent pressure sores	1	2	3	4	5
26.	symptoms that may mean he/she is sick	1	2	3	4	5

Interpersonal Relationships

27.	how to maintain relationships with family and friends	1	2	3	4	5
28.	how to talk with family and friends about his/her disability	1	2	3	4	5
29.	reorganization (or change) of roles within the family	1	2	3	4	5
30.	involving family/friends in his/her care	1	2	3	4	5
31.	sexual activity	1	2	3	4	5
32.	how to meet new people	1	2	3	4	5

RETURN OF THIS QUESTIONNAIRE WILL BE CONSTRUED AS INFORMED CONSENT

Communication

33.	speaking	1	2	3	4	5
34.	using the telephone	1	2	3	4	5
35.	writing	1	2	3	4	5
36.	using a communication board from speech therapy	1	2	3	4	5

Financial

37.	what expenses are covered by his/her insurance	1	2	3	4	5
38.	types of financial assistance available	1	2	3	4	5
39.	how to maintain financial security	1	2	3	4	5
40.	if and how much he/she will be able to work	1	2	3	4	5
41.	finding out about jobs	1	2	3	4	5

Recreation and Leisure

42.	ways to participate in activities he/she enjoyed before his/her stroke	1	2	3	4	5
43.	new ways to enjoy his/her leisure time	1	2	3	4	5

RETURN OF THIS QUESTIONNAIRE WILL BE CONSTRUED AS INFORMED CONSENT

Resources

44.	how to get special equipment when he/she goes home	1	2	3	4	5
45.	how to arrange for someone to care for him/her at home	1	2	3	4	5
46.	how other people with strokes have dealt with problems	1	2	3	4	5
47.	available organized groups of people with strokes (stroke club)	1	2	3	4	5

APPENDIX E

Permission to Use Donlon's Tool

Jane Donlon
4006½ Los Feliz Blvd.
Los Angeles, CA 90027

October 15, 1985

June Stanley
4008 Weyburn Place
Plano, TX 75023

To Whom It May Concern:

I give my permission for June Stanley, a graduate nursing student at Texas Woman's University, to use my instrument for collecting data on learning needs of stroke patients. I understand the following changes have been made: the instrument has been titled Donlon's "Questionnaire for Patients/Nurses" and the instrument has been modified slightly for use with the stroke patient.

The changes in the instrument are as follows. The word stroke has been used throughout the questionnaire in place of the word injury. The item feeding myself has been added under the category of Personal Care. Under the subheading of Mobility, the item about driving a vehicle has been deleted, the item getting into/out of bed/chair has been added and the item getting up from the floor has also been added. The item about preventing muscle spasms under Prevention of Complications has been deleted. Under Communication, the items speaking and using a communication board have been added, and the items typing and using a tape recorder have been deleted. Under Financial, the item of finding out about school has been deleted.

Sincerely,

Jane Donlon

Jane Donlon

APPENDIX F

Rating System Used for Tool

This is the rating system used for the questionnaire. Please rate each item's importance using the numbers as they are explained below.

1 = there is NO IMPORTANCE in learning it

2 = there is VERY LITTLE IMPORTANCE in learning it

3 = there is SOME IMPORTANCE in learning it

4 = there is MUCH IMPORTANCE in learning it

5 = there is EXTREME IMPORTANCE in learning it

APPENDIX G

Permission from Graduate School

TWU Texas Woman's University
P.O. Box 22479, Denton, Texas 76204 (817) 383-2302, Metro 434-1757, Tex-An 834-2133
THE GRADUATE SCHOOL

April 7, 1986

Ms. June Groseclose Stanley
1637 Mesquite Trail
Plano, TX 75023

Dear Ms. Stanley:

I have received and approved the Prospectus for your research project. Best wishes to you in the research and writing of your project.

Sincerely yours,

Leslie M Thompson

Leslie M. Thompson
Provost

tr

cc Dr. Susan Goad
Dr. Anne Gudmundsen

APPENDIX H

Agency Permission

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE _____

GRANTS TO June Groseclose Stanley
a student enrolled in a program of nursing leading to a Master's Degree at Texas Woman's University, the privilege of its facilities in order to study the following problem.

Perceived Learning Needs For Rehabilitation

Following Stroke

The conditions mutually agreed upon are as follows:

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

February 13, 1986
Date

Signature of ~~Agency~~ Personnel

June G. Stanley
Signature of Student

Susan Goad
Signature of Faculty Advisor

*Fill out & sign 3 copies to be distributed: Original-student; 1st copy-Agency; 2nd copy-TWU School of Nursing

APPENDIX I

Research Review Committee Exemption

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING

PROSPECTUS FOR THESIS/DISSERTATION/PROFESSIONAL PAPER

This prospectus proposed by: June Groseclose Stanley

_____ and entitled:

Perceived Learning Needs For Rehabilitation

Following Stroke

Has been read and approved by the member of (his/hers)

Research Committee.

This research is (check one):

___✓___ Is exempt from Human Subjects Review Committee review because components of this study subside within the guidelines of Category I (no risk) of the Federal Report published January 26, 1981, Part X, effective July 27, 1981.

_____ Requires Human Subjects Review Committee review because _____

_____

Research Committee:

Chairperson, _____

Member, _____

Member, _____

Date: November 5, 1985

Dallas Campus ✓ Denton Campus ___ Houston Campus ___