LIFE SATISFACTION OF PATIENTS RECEIVING
CONTINUOUS AMBULATORY PERITONEAL DIALYSIS

by

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A Thesis Submitted to the Faculty of the
COLLEGE OF NURSING
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF SCIENCE
In the Graduate College
THE UNIVERSITY OF ARIZONA

1981
STATEMENT BY AUTHOR

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The author wishes to express her sincere gratitude to Dr. Katherine Young and Anne Gassmann for serving as members of her thesis committee, and for their assistance in the guidance of this study.

Special appreciation and thanks are given to the chairperson of the thesis committee, Dr. Alice J. Longman, for her encouragement, support and guidance throughout the development of this study.

The author also would like to extend sincere appreciation to the staff of the institution where the data were collected and to the patients who were so willing to cooperate and participate in this study.
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ABSTRACT

This study was conducted to describe change in the various components of the life of patients receiving Continuous Ambulatory Peritoneal Dialysis and to obtain ratings of current life satisfaction. An interview was conducted and consisted of 19 life change items and one item to measure current life satisfaction.

The sample for the study was comprised of 11 subjects. All of the subjects had experienced change in their lives since receiving Continuous Ambulatory Peritoneal Dialysis. Eight subjects indicated the overall change of their lives was for the better and three indicated the overall change was for the worse. The mean and direction of change for each change item in the interview was obtained.

The subjects then selected a number from one to 10 to rate their current life satisfaction with one indicating low life satisfaction and 10 indicating high life satisfaction. The range of the ratings was from three to 10 with a mean score of 6.6 for the total sample. Means of current life satisfaction ratings were compared between subjects who had been on hemodialysis prior to receiving Continuous Ambulatory Peritoneal Dialysis and subjects who had not; married and unmarried subjects; and male and female subjects.
CHAPTER 1

INTRODUCTION

Prior to 1960, there was no treatment for patients in chronic renal failure with end-stage uremia. These patients were classified as "terminal uremics" and were left to suffer and die (Abram, 1972). Patients with end-stage renal disease are now offered the chance to extend their lives either through dialysis or renal transplantation. Decisions about the form of treatment that offer the patient optimum survival and quality of life is made jointly by the patient, family and physician (Tilney, et al., 1975; Kress, 1975). Medical and social factors affecting the patient should be considered in the choice of treatment. Psychological factors should also be considered, as chronic dialysis and transplantation have been shown to be psychologically stressful to patients who have undergone these forms of treatment (Kress, 1975; De-Nour and Shanan, 1980).

From 1960 to 1978, there was only one form of dialysis, hemodialysis, used on a long-term basis for the majority of patients in end-stage renal disease. Studies have shown that hemodialysis increased the chances for survival for patients in end-stage renal disease, but it also created problems for the patient and his family (Kress, 1975).
Another form of dialysis, Continuous Ambulatory Peritoneal Dialysis, was developed by Popvich and Moncrief in 1976 and refined by Oreopoulos and associates in 1978. With these developments, Continuous Ambulatory Peritoneal Dialysis has been accepted and used throughout the world as a standard procedure of dialysis (Oreopoulos, 1980). It is claimed that there are many medical and psychological advantages for patients who undergo treatment with Continuous Ambulatory Peritoneal Dialysis when it is compared to hemodialysis and intermittent peritoneal dialysis.

The focus of nursing in the past has been largely concerned with the technical procedures of chronic dialysis with little emphasis on the quality of life of the person (Jackle, 1974). Nurses can assess if Continuous Ambulatory Peritoneal Dialysis can offer advantages that may enhance life satisfaction for patients receiving this form of treatment for end-stage renal disease.

Statement of the Problem

How do patients describe aspects of life change and current life satisfaction while receiving Continuous Ambulatory Peritoneal Dialysis?

Statement of Purpose

The purpose of this study was to describe life change and current life satisfaction ratings of patients who are receiving Continuous Ambulatory Peritoneal Dialysis. This study should make
nurses aware of needs of patients who are receiving Continuous Ambulatory Peritoneal Dialysis; with this knowledge, nurses can help patients adjust to treatment of Continuous Ambulatory Peritoneal Dialysis.

**Significance of the Problem**

Now for the first time there is a growing population of long-term survivors of end-stage renal disease who are being maintained on chronic dialysis. Many refinements have been made in dialysis since 1960, when it was a new and experimental procedure. The majority of nursing and medical literature, in the past, has been devoted to the technical improvements and the physiological effects of dialysis on patients. Health professionals working with the dialysis population now perceive that this long-term maintenance therapy has both a psychological as well as a physiological impact on the lives of the patients and their families.

Hemodialysis has been the treatment of choice for the majority of patients in end-stage renal failure. From its advent in 1960 until 1972, patients were carefully screened and selected for hemodialysis due to the lack of facilities available (Kress, 1975). Hemodialysis was made widely available to patients in end-stage renal disease by the United States Government with the 1972 Amendment to the Social Security Act which helped "to assure that any individual who suffers from chronic renal disease will have available to him the necessary lifesaving care" (Kress, 1975:41). Another advance was made when Medicare,

The patient undergoing hemodialysis must adhere to the strict regimen he is put on in order to survive (O'Brien, 1980). The regimen is comprised of spending approximately six hours on the machine three times a week, dietary and fluid restrictions, taking medications several times a day and eliminating some physical activities. Patients on hemodialysis usually have uremic symptoms the day before dialysis such as lethargy, headache, lack of alertness, muscle weakness, nausea, pruritis, hypertension and others (Burton, et al., 1981).

Continuous Ambulatory Peritoneal Dialysis uses the peritoneum as the dialysis membrane 24 hours a day. Dialysate in two liter plastic bags is exchanged four times a day by the patient using aseptic technique. Three of the exchanges stay in the peritoneal cavity for five hours during waking hours and the fourth exchange stays in the peritoneal cavity overnight. The semi-permanent catheter, surgically placed in the abdomen, serves to both fill and drain the peritoneal cavity. The average time required to drain the peritoneal cavity with the used dialysate and to fill the peritoneal cavity with fresh dialysate takes approximately 30 minutes for each exchange (Sorrels, 1979).

There are few dietary and fluid restrictions with Continuous Ambulatory Peritoneal Dialysis. Because the dialysis process is ongoing and the person is maintained in a steady state, disequilibrium symptoms disappear that are seen with hemodialysis and intermittent
peritoneal dialysis (Oreopoulos, et al., 1979; Moncrief and Nolph, 1980; Oreopoulos, 1980). Other medical advantages seen in patients receiving Continuous Ambulatory Peritoneal Dialysis are the removal of sodium, potassium, small and middle molecules, and water (Oreopoulos and Katirtzoglou, 1979). Calcium and phosphorus are usually maintained within normal limits and patients use minimal doses of phosphate-binding oral agents, if they are needed at all. Blood pressure control is easier to attain with little or no use of anti-hypertensive medication (Weinman, et al., 1980; Nolph, 1980). Other advantages of Continuous Ambulatory Peritoneal Dialysis cited are the omission of a partner, machine and shunt (Moncrief and Nolph, 1980).

Most patients on Continuous Ambulatory Peritoneal Dialysis have reported an improvement in well-being, an increase in energy, improved appetite, an increase in activity, the ability to live a more normal life style and most importantly, the sense of freedom that they experience (Gokel, et al., 1980; Sorrels, 1979; Burton, et al., 1981). Considering the advantages of Continuous Ambulatory Peritoneal Dialysis, do patients perceive change in various aspects of their lives and how do they rate current life satisfaction while receiving this form of treatment?

**Conceptual Framework**

The concepts chronic illness, treatment, life change and current life satisfaction comprised the conceptual framework. The framework described the relationship that treatment of chronic renal failure
Continuous Ambulatory Peritoneal Dialysis may have on life change and current life satisfaction.

Quality of life is an abstract concept to study and define (Jackle, 1974). In the past, American society has thought that quality of life could be measured in objective terms of economic satisfaction and material possessions and that they were the only important factors for human welfare and happiness (Laborde and Powers, 1980; Campbell, 1976). Social indicators such as educational achievement and occupation have been used by social scientists to objectively assess the quality of a person's life (Laborde and Powers, 1980). It was implied by Campbell (1976) that these objective measures may describe conditions that influence life experience, but they do not assess life experience directly. Assessment of the quality of life has now shifted from variables that are material to those that are psychological and less tangible. These include variables such as social prestige, dominance, group identification and sense of achievement, or what Maslow referred to as the "higher needs" (Laborde and Powers, 1980; Campbell, 1976).

A major component of an inclusive view of quality of life is life satisfaction (Jackle, 1974). Life satisfaction, or a person's general appraisal of his life, is specifically defined as the pleasure one takes from the round of activities that constitute his daily life, one's perception of his life as meaningful and capable of continued development, and one's view of his own situation as satisfying in terms of what is and what might be for him, in light of his own purpose (Jackle, 1974:362).
Life satisfaction should be a major component of any comprehensive conception of "adjustment" or "mental health" (Sells, 1969).

It is not known if factors can be ranked in importance to one another when assessing life satisfaction. Life events in which there are psychological gains and losses such as births, deaths, marriages, accidents, illnesses and unemployment may have a short-term impact on the way the person appraises his life (Campbell, 1976). When dealing with subjective measures, the ratings may not have the same meaning to different people and will not have the precision of objective indicators. However, what they do measure is the individual's sense of well-being (Campbell, 1976; Jackle, 1974).

Palmore and Luikart (1972), in a study of life satisfaction in early and middle age, reported that self-rated health was the strongest variable related to life satisfaction. Other variables identified in their study were social activity, socio-economic status and age. They concluded that people who are more satisfied with their lives "tend to be healthier, more socially active, tend to have more income and education and tend to be younger" (Palmore and Luikart, 1972:68).

Other studies have been conducted to determine if other components of life were highly related to life satisfaction. These included marital status, presence or absence of children, employment status, sex of the person, relationships with others and family relationships. These variables were less strongly related to life satisfaction than self-rated health (Palmore and Luikart, 1972). The importance of the variable of self-rated health was similar to the
results of other studies of life satisfaction in old age (Neugarten, Havighurst and Tobin, 1961).

Palmore and Luikart (1972) implied that if self-rated health is a highly related variable to life satisfaction, then a person's perception of his health influences his over-all optimistic or pessimistic view of life satisfaction. The person's subjective evaluation of his health has been shown to influence his life more than an objective evaluation by a physician. It was stated "that a person with poor objective health may still have a high life satisfaction if he believes his health is relatively good and similarly a person with good objective health may have low satisfaction if he is convinced his health is relatively poor" (Palmore and Luikart, 1972:73). De-Nour and Czackes (1976) concluded that the patient's reaction and attitude toward illness is influenced by his personality.

Chronic illness may have an impact on a person's view of life satisfaction. The majority of health practitioners assume that the person who is suffering from a chronic illness does have some type of change in varying degrees of life-style. This may be the result of the underlying disease process itself or the result of the treatment of the disease. The change may be physiological or psychological involving activities that the person may associate with a full and productive life. Therefore, there may be a reduction in the quality of life of that person (Laborde and Powers, 1980).

Burton, et al. (1981) stated that "of all chronic illnesses, perhaps no condition is as stressful as chronic kidney failure" (p. 25).
The person undergoing dialysis is constantly aware that this form of treatment does replace the function of his irreversibly damaged kidneys, but that dialysis, in itself, is not a cure for end-stage renal failure (Burton, et al., 1981; Kress, 1975). The chronicity of this situation may have an impact on what the patient undergoing dialysis perceives his own health status to be.

There are many sources of stress for patients receiving hemodialysis. Psychological stressors include dependence on a machine, dependence on the medical staff or a partner, loss of mastery of one's life because the machine is run by others, frustration of drives, the inability to plan for the future and the fear of death. Physiological stressors listed in the literature are the diet, fluid and physical restrictions of the hemodialysis regimen and complications of shunts and fistulas (British Medical Journal, 1980; De-Nour and Czaczkes, 1976). These stressors affect the autonomy of the person receiving hemodialysis by restricting his freedom of choice (Jackle, 1974). Activities may also be affected by these stressors, resulting in a change in life style of the person receiving dialysis. The conceptual model for this study is shown in Figure 1.

According to Dimond (1979), nursing is just starting to explore the patient's adaptation to chronic illness. Nursing is beginning to set up models to guide nursing care for the patient who requires long-term care. The goal of nursing, when setting up these models, is to identify factors which help the person lead a life style as close as possible to the one he experienced before the onset of the illness.
Figure 1. Conceptual Framework For Study
In order for nursing to reach this goal, there must be identification or major variables of life satisfaction important to the person suffering from chronic disease (Dimond, 1979). The variables of marital status, sex of the person and whether the person has received prior treatment of hemodialysis need to be identified in the patient population who is receiving Continuous Ambulatory Peritoneal Dialysis. Variations in current life satisfaction ratings may be apparent in the patient receiving Continuous Ambulatory Peritoneal Dialysis due to the influence of these variables.

**Definition of Terms**

Life Satisfaction - A person's appraisal of various components of his life.

Continuous Ambulatory Peritoneal Dialysis (CAPD) - A form of self-dialysis that the patient has undergone independently for at least two weeks.
CHAPTER 2
SELECTED REVIEW OF LITERATURE

Until recently, there were few studies about life satisfaction. The studies reported were exploratory in nature and tried to define significant aspects of life of people in different populations. Some studies on this subject have been conducted on patients on hemodialysis and very few on patients receiving Continuous Ambulatory Peritoneal Dialysis. This review of literature is divided into three sections: life satisfaction, life satisfaction studies of patients on hemodialysis and renal transplantation, and Continuous Ambulatory Peritoneal Dialysis.

Life Satisfaction

According to Campbell (1976), early research studies conducted on life satisfaction used three major methods to obtain subject indicators of well-being. In the first method, the subject was asked to compare his perception of his present life situation to a life situation he aspired to, expected or thought he deserved. The discrepancy between his perceived life rating and aspired life rating would be used to measure satisfaction or dissatisfaction with greater satisfaction indicating a sense of well-being.
The second approach studied subjective feeling states that people encountered in their daily lives. These states were assessed by the assignment of numbers to particular positive and negative events that had occurred in the subjects' lives in the recent past.

The third major method was derived from psychiatric practice. This strategy consisted of questions about symptoms, experiences and general feelings. Questions regarding life satisfaction reflected positive responses of well-being and questions regarding worries, anxieties and emotional crises which reflected negative responses of well-being.

Campbell (1976) reported that studies were conducted using these three methods of measurement and reported that general satisfaction with life tends to be low among young people and tends to increase with age. Happiness was reported to be higher in young people and tended to decrease with age. Happiness with marriage was reported to increase with the level of education of the subjects, but as the level of education increased, feelings of inadequacy as a marriage partner increased.

Neugarten, Havighurst and Tobin (1961) conducted a study to describe the psychological well-being of older people. The life satisfaction rating scale used in this study was composed of five components: 1) if the person took pleasure from everyday activities of his life; 2) if the person regarded his life as meaningful; 3) if the person felt he had succeeded in achieving major life goals; 4) if the person had a
positive self-image; and 5) if the person maintained a happy and optimistic attitude and mood. These components were summed to determine an overall rating of life satisfaction for each subject.

With these measures, Neugarten, et al. (1961) reported that there was no correlation between life satisfaction ratings and age. They reported a positive relationship between life satisfaction and socioeconomic status. They found that there were no significant differences of life satisfaction ratings between the two sexes of the elderly population. They found lower life satisfaction ratings by people who were not married. This included people who were either single, divorced, separated or widowed in both sexes and in both the older and younger subgroups within the elderly population.

Palmore and Luikart (1972) conducted a longitudinal study to analyze the social, psychological and physical determinants of adaptation of people to middle age. Variables measured in this study were life satisfaction ratings, health variables, activity variables, social-psychological variables and socio-economic variables. They reported that older middle-aged people were inclined to be slightly less satisfied with life than younger middle-aged people. Palmore and Luikart also reported that employment was a significant factor of life satisfaction only to the males in the population studied. They related that the sex of the person was the lowest variable related to life satisfaction. It was also implied in their study that the total number of social contacts of the population in their study had little significance on life satisfaction ratings.
Campbell (1976) conducted a study to assess the quality of American life. Each subject in the study was given a structured questionnaire and participated in an interview which consisted of describing and assessing 15 domains of life. They chose one word from a pair of adjectives that described their lives with both a positive and negative connotation. Significant variance in measures of well-being in this study was contributed to the factors of age with the related variable of life cycle which was the combination of age with the presence or absence of marriage and children. Subjects whose children were grown and were still married themselves had consistently high scores of individual well-being. Scores of divorced women were consistently low and unemployed people reported a slight decrease in their feeling of well-being.

**Life Satisfaction of Patients Receiving Hemodialysis and Renal Transplantation**

Kemph (1977) stated that the person who is undergoing hemodialysis faces a compromise in his quality of life. He faces a reduction in total capabilities that he had prior to renal failure, but at the same time he has improvement of uremic symptoms such as anorexia, dizziness, seizures, apathy and organic brain syndrome. Laborde and Powers (1980) stated that dialysis may increase the patient's physiological status so much that the threat of treatment is overcome.

In a study by Brown, et al. (1974) of life satisfaction of patients on hemodialysis, it was found that all patients reported a decrease in physical and emotional well-being described commonly in
phrases such as "lack of energy", "lack of ambition" and/or a "loss of interest." Levy and Wynbrandt (1975) studied a group of 18 patients on hemodialysis. Several of these patients reported a drop in their income and a decline in their family life since they began dialysis.

Brown, et al. (1974) in the same study of life satisfaction of patients on hemodialysis described that well-adjusted patients on hemodialysis "tended to minimize their losses and emphasize the capabilities they still retained" (p. 68). They tended to understand their limitations and had many varied interests and activities that primarily were not physical. These activities became important factors for the person who experienced a decrease in physical well-being. These people tended to understand their financial status and had more financial resources and reserves. Well-adjusted patients also led more active and productive lives because they developed a sense of independence from the hemodialysis machine.

The less well-adjusted patients on hemodialysis tended to be much more aware of the decrease in their physical and mental capabilities. It was suggested that this could have been due to the fact that their work and recreational activities were primarily physical prior to the development of kidney failure. Levy and Wynbrandt (1975) stated that hopelessness and despair were seen in the less well-adjusted patients on hemodialysis.

A study conducted by Cantril (1965) compared the ratings of life satisfaction of patients on dialysis to a large sample of the United States population. Both groups were given a ladder with a
number ranging from 1 to 10 on each step and asked to place themselves on the ladder step that they believed they were on for past, present and future life satisfaction scores.

For their present life satisfaction ratings, the average score for the patient on dialysis was 5.5, half-way between the best and worst possible life. The normative group of the United States population rated their present lives at seven. Rating their lives in the past, patients on dialysis averaged a score near the top of the ladder as compared to the normative group, which on the average, rated the past almost a step below the present. In rating the future, patients on dialysis rated it slightly higher than the present as compared to a rating of a full step higher by the normative group. Hope, a component of life satisfaction, was displayed by both groups in this study by rating the future as the same or higher than the present and not resigning themselves to a deteriorating future (Jackle, 1974).

Levy and Wynbrandt (1975) reported that women were more well-adapted to life on hemodialysis than men. They concluded that this adjustment may have been due to a more flexible schedule of household duties and availability of others to help as compared to the man whose employment is usually outside the home. In a study of compliance of hemodialysis patients, O'Brien (1980) found that patients who had never been married had a low compliance score on the dialysis regimen, and that patients who were married had a better compliance score.
Abram (1972) concluded from a study conducted on patients receiving kidney transplants that their quality of life was impeded by their constant awareness of the underlying chronic renal failure and the uncertainty of the future. Overall, he concluded that patients who had transplants were satisfied with their lives in general and tried to live them fully.

In view of these factors that may decrease life satisfaction of patients who are on hemodialysis, Naish (1979) quoted statistics from the United Kingdom Transplant Annual Report of 1977-1978 stating that two-thirds of patients receiving hemodialysis were employed full time and an additional seven percent worked part time. He also stated that four out of five successfully transplanted recipients achieved the life style that they hope for.

**Continuous Ambulatory Peritoneal Dialysis**

In the past, peritoneal dialysis was used only for patients who had contraindications to or complications of hemodialysis (Karanicolas, 1977). With the advent of Continuous Ambulatory Peritoneal Dialysis, peritoneal dialysis may advance to be a major type of maintenance therapy for patients in chronic renal failure (Faller and Marichal 1980).

Burton, et al. (1981) reported that patients on Continuous Ambulatory Peritoneal Dialysis, who carry two liters of fluid in their peritoneal cavities, saw themselves as less in the role of sick and handicapped. These patients tended to be more focused toward life rather than the life-threatening menace of their condition. They
stated that patients on hemodialysis appeared to spend all of their energies to stay alive, while patients receiving Continuous Ambulatory Peritoneal Dialysis could devote their energies toward some of the attractions of living.

Oreopoulos, et al. (1979) stated that as soon as patients start Continuous Ambulatory Peritoneal Dialysis, they notice a feeling of well-being. They did not know if this is a placebo effect or if it is due to the physiological factors of the removal of small molecules in the blood such as blood urea nitrogen and creatinine or the removal of unknown toxic substances that are of middle molecular size.

Continuous Ambulatory Peritoneal Dialysis may have advantages for several patient populations. For children, in addition to the treatment being simpler, allowing a better diet and giving more freedom than hemodialysis, it may also contribute to better growth. Advantages to persons with diabetes, such as better control of blood sugar and hypertension, may arrest or improve diabetic complications (Oreopoulos and Kartirtzoglou, 1979). This form of treatment may be useful for the elderly patient with cardiovascular problems (Faller and Marichal 1980).

Continuous Ambulatory Peritoneal Dialysis does not act as rapidly as hemodialysis in acute uremia, hyperkalemia, severe acidosis, drug intoxication or poisoning (Moncrief and Nolph, 1980). Since Continuous Ambulatory Peritoneal Dialysis is still a relatively new procedure, the long-term effects of this treatment are unknown at this time. Studies are being done to determine the long-term effects of the
continual absorption of glucose and lactate; amino acids may replace glucose in the future (Moncrief and Nolph, 1980; Faller and Marichal, 1980).

Peritonitis is one of the main problems seen with Continuous Ambulatory Peritoneal Dialysis. The frequency of peritonitis has decreased from one episode every eight to 10 weeks to one to two episodes per year. This decrease was seen with the advent of use of plastic bags to store the dialysate instead of glass bottles. Most infections are due to catheter contamination during bag changes. Peritonitis is usually treated by the patient himself on an outpatient basis by adding antibiotics to the dialysis solution (Nolph, 1980). Some patients have lost the ability to lose water through ultrafiltration. This is seen very often after an episode of peritonitis in which there is a decrease of the peritoneal surface area due to the thickening of the membrane (Oreopoulos, et al., 1981).

Weight gain and hyperlipidemia have been seen in patients receiving Continuous Ambulatory Peritoneal Dialysis. Faller and Marichal (1980) reported that 14 patients had an average weight gain of 5.3 kg when they were treated with Continuous Ambulatory Peritoneal Dialysis for more than three months. They hypothesized that this may have been due to a better appetite and the amount of glucose absorbed.

Some contraindications have been listed for the use of Continuous Ambulatory Peritoneal Dialysis by some patients. They are
patients who display an unwillingness to learn the technique, a lack of self-discipline and visual or neurologic problems (Lacke, et al., 1981).

Nolph, et al. (1980) stated that there were currently more than 670 patients in more than 116 medical centers in the United States receiving Continuous Ambulatory Peritoneal Dialysis. It was also suggested from reports of the November 1979 International Symposium on Continuous Ambulatory Peritoneal Dialysis that more than 2000 patients may be undergoing this treatment in the world (Nolph, et al., 1980). With the increasing widespread use of this form of treatment, it is important for nurses to better understand the needs of these patients by identifying change in various aspects of their lives.
CHAPTER 3

METHODOLOGY

This chapter consists of: the research design, the setting, the sample, approval for the study, method of data collection, data collection instruments, method of data analysis and limitations of the study.

Research Design

This was a descriptive study designed to describe components of life change and current life satisfaction of patients receiving Continuous Ambulatory Peritoneal Dialysis. This description was obtained through the semi-structured personal interview consisting of aspects of life change and a current life satisfaction rating chosen from a review of the literature.

Setting

This study was conducted in a large city located in the southwest. The subjects for the interviews were being treated in a dialysis center with a specialty of Continuous Ambulatory Peritoneal Dialysis.
Sample

A convenience sample of 11 patients were interviewed. They met the following criteria: 1) had a diagnosis of end-stage renal disease; 2) were receiving Continuous Ambulatory Peritoneal Dialysis; 3) had been undergoing Continuous Ambulatory Peritoneal Dialysis independently for at least two weeks after the two week instruction session at the dialysis center; 4) were able to understand English; 5) were Caucasian; 6) were 18 years or older; and 7) agreed to participate in the study. All of the patients in this sample received a prescribed two week home training session on Continuous Ambulatory Peritoneal Dialysis at the dialysis center after discharge from the hospital for placement of the abdominal catheter.

Approval for the Study

Approval for this study was obtained from the Human Subjects Committee of the University of Arizona, the agency where the interviews were conducted and from each patient interviewed in this study. The study was reviewed and approved as exempt from University review by the College of Nursing Ethical Review Sub-committee of the Research Committee and the Director of Research. A copy of the letter of approval for this study is contained in Appendix A.

Method of Data Collection

Four of the patients were approached for the interview when they reported to the dialysis center for a monthly scheduled appointment for a tubing change by the nursing personnel. Seven of the patients were contacted at their homes for the interview. When the patients
agreed to participate in the study, arrangements were made to conduct and complete the interview.

**Data Collection Instruments**

The interview schedule was composed of a disclaimer, demographic data sheet and a semi-structured personal interview.

The cover sheet consisted of a brief explanation of the study, or a disclaimer. Included in this disclaimer was the right of the participant to ask questions or withdraw from the study at any time during the interview and the assurance of privacy to the participant by the assignment of a code number to each subject (Appendix B).

The demographic data sheet was designed by the investigator with input from a registered nurse who worked with the patient population receiving Continuous Ambulatory Peritoneal Dialysis. The demographic sheet consisted of the following items: age, sex and marital status of the subject, with whom the subject lived, how long the subject had been receiving CAPD, if the subject had been on hemodialysis prior to starting CAPD, how the subject initially learned about CAPD, why the subject was on CAPD, if the subject had complications while receiving CAPD, and if the subject had any other medical problems other than end-stage renal disease at the time of the interview (Appendix C). These variables were deemed appropriate to this study. Variations in life satisfaction ratings could have been due to the influence of these variables.

The personal interview was composed of 19 life change items and one item to measure current life satisfaction adapted from an interview
schedule developed by Young and Longman (1980) for patients with cancer. Subjects were asked to respond freely on how these aspects of life have changed since receiving Continuous Ambulatory Peritoneal Dialysis (Appendix D). The subjects were then handed a card and asked to indicate the amount of change experienced in each area since they had received Continuous Ambulatory Peritoneal Dialysis (Appendix E). Seventeen of the cards had numbers that ranged from 1, which indicated no change at all, to 6, which indicated a great deal of change. If the subjects indicated there was a change, they were asked if the change was for the better or the worse and this was recorded on the bottom section of the card.

Some modifications were made in the life change items used in the Young and Longman study (1980). Some items were deleted because they were deemed inappropriate for subjects with end-stage renal disease or condensed into broader, more generalized categories. A nurse who worked with patients receiving Continuous Ambulatory Peritoneal Dialysis was consulted for content validity of the items in the interview. The item, feelings about self, was eliminated from the interview because this area was judged to be covered by several other categories such as physical appearance, style of dress, physical endurance, sense of independence, decision making and sense of achievement. The items, relationships with spouse, relationships with children and relationships with inlaws, relatives were incorporated into one item, relationships with family (spouse, children, relatives). This new item was judged to be inclusive because the investigator did not anticipate many of the subjects to be married. The item, relationships with physician or other
health professionals was modified to read relationships with health professionals. This was done because the patient who is receiving CAPD works closely not only with the physician, but also has regular monthly appointments with nurses and a technician at the dialysis center. The items, relationships with associates at work, job performance and job satisfaction were asked only if the subject was employed at the time of the interview. The item, church or religious group involvement, was combined with social activities to form the new item social activities (including religious group involvement). The item, social support, was eliminated from the interview, as this was judged to be covered by the items of relationships with family, relationships with health professionals, relationships with friends and social activities (including religious group involvement). The item, changed by treatment, was omitted from the interview because this area was judged to be covered by the new item, change in life satisfaction since CAPD began. The item, thought of stopping treatment, was deleted from the interview because the patient in end-stage renal disease is dependent on treatment by dialysis to survive. This varied from the original interview by Young and Longman (1980) in which persons with cancer were asked if they thought of stopping treatment.

The items from the Young and Longman instrument, rate satisfaction with current quality of life and rate level of current quality of life were combined into the new item, current life satisfaction. An example of the personal interview is contained in Appendix D.
Following these adjustments, cards on which the subject indicated the degree of change for each item were given to the subject for 17 out of the 19 change items of the interview. Cards were not given with the two change items, same choice of treatment and what things are meaningful to you. Scores for each of the 17 life change item cards had the range of 1, which indicated no change in the subject's life, to 6 which indicated a great deal of change since receiving Continuous Ambulatory Peritoneal Dialysis (Appendix E).

Current life satisfaction ratings were also measured with a card that had a score range of 1 to 10. The score of 1 indicated low current life satisfaction and 10 indicated high current life satisfaction. An example of the two types of cards used in this interview is contained in Appendix E. Each subject was asked to choose the number that closely measured the degree of life change since receiving Continuous Ambulatory Peritoneal Dialysis following discussion of the item (Appendix E).

**Method of Data Analysis**

Scores of the life change items were totaled for each subject interviewed. If the subject answered all 17 items, the scores could range from 17 to 102, the latter indicated greatest change since receiving Continuous Ambulatory Peritoneal Dialysis.

If the subjects indicated change in a change item of the interview, they indicated if the change was for the better or for the worse on the bottom of the interview card. The number of items checked for the better were totaled and the number of items checked for the worse were totaled for each subject. The direction of the subject's
overall life change was determined by the highest number of the sums of change for the better and change for the worse. This direction of change was recorded for each subject.

Total scores and means for 14 out of the 19 life change items of the interview were obtained from the data. This was done to indicate the degree of change by item in the interview. The number of times the subjects indicated the change in the item was for the better was recorded and totaled and the number of times change in the item was for the worse was indicated was also recorded and totaled. The direction of change for each item was determined by the highest total between the sums of change for the better and change for the worse.

Comparisons were made between mean scores of current life satisfaction ratings of subjects who had been on hemodialysis prior to receiving Continuous Ambulatory Peritoneal Dialysis and subjects who had not; between married and unmarried subjects; and between male and female subjects. Variations in the life satisfaction ratings may have been related to the variables of whether the subject had received hemodialysis prior to starting Continuous Ambulatory Peritoneal Dialysis, marital status of the subject and sex of the subject. These variables may be related to a subject's perception of life satisfaction as reported in studies conducted in the review of the literature. The verbal comments obtained during the interview were grouped and categorized.
Limitations of the Study

1. The interview used for this study was modified for use by a different population of patients in end-stage renal disease receiving Continuous Ambulatory Peritoneal Dialysis.

2. The modified interview for this study has not been tested for validity and reliability for the population of patients receiving Continuous Ambulatory Peritoneal Dialysis.
CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

The findings and the statistical analysis for the data collection are presented in this chapter.

Characteristics of the Sample

The convenience sample for this study consisted of 11 patients receiving Continuous Ambulatory Peritoneal Dialysis at a regional dialysis center who met the criteria for the study. There were five females and six males; the age range of the sample was 25 to 62 years, with a mean age of 43.5 years. Nine subjects reported that they were married, one was single and one was separated (Table 1). Five of the subjects lived with their spouse, four lived with their spouse and children, one lived with a child and one lived with friends.

Seven of the subjects had been on hemodialysis before starting Continuous Ambulatory Peritoneal Dialysis and four had not been on hemodialysis. The range for the length of time that the subjects received hemodialysis was three months to 120 months with a mean of 57 months. The length of time that the subjects had been receiving Continuous Ambulatory Peritoneal Dialysis ranged from one month to 22 months with a mean of 8.6 months.
Table 1. Characteristics of the Sample: Sex and Marital Status

<table>
<thead>
<tr>
<th>Sex</th>
<th></th>
<th>Marital Status:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>6</td>
<td>Married</td>
<td>9</td>
</tr>
<tr>
<td>Female</td>
<td>5</td>
<td>Single</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Separated</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>Total</td>
<td>11</td>
</tr>
</tbody>
</table>
When the subjects were asked how they initially learned about Continuous Ambulatory Peritoneal Dialysis, five responded that they learned about it solely from a nurse, two from a physician, one from the newspaper and magazines and one from a social worker. Two subjects gave multiple answers. One responded nurse, physician, patients on CAPD, newspaper and magazines, and medical literature and one cited nurse, and newspaper and magazines (Table 2). In response to the question, "Why are you on CAPD?", eight cited voluntary choice between CAPD and hemodialysis, one stated complications on hemodialysis, one stated recommendation of physician and one stated distance to the dialysis center and convenience for the family (Table 3).

Seven of the 11 subjects reported complications since receiving Continuous Ambulatory Peritoneal Dialysis. Four have had peritonitis a total of seven times, two have had an infection around the catheter site a total of two times and two have had a blockage of the abdominal catheter a total of three times. Other responses were from two subjects who have dislodged the abdominal catheter a total of two times, one subject had bleeding around the catheter site one time and two subjects experienced slow drainage many times the first two months after starting CAPD.

Seven of the 11 subjects stated that they had medical problems other than renal failure at the time of the interview. Three subjects stated they had hypertension, two stated they had diabetes, two had hiatal hernias and two had heart problems. One subject stated hypotension, one stated scleroderma, one reported lupus erythematosus which was currently in remission and one subject has become blind and has had a leg amputation secondary to diabetes.
Table 2. Sources From Which Subjects Learned of Continuous Ambulatory Peritoneal Dialysis

<table>
<thead>
<tr>
<th>Source</th>
<th>Number of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse</td>
<td>7</td>
</tr>
<tr>
<td>Physician</td>
<td>3</td>
</tr>
<tr>
<td>Social Worker</td>
<td>1</td>
</tr>
<tr>
<td>Patients on CAPD</td>
<td>1</td>
</tr>
<tr>
<td>Family and Friends</td>
<td>1</td>
</tr>
<tr>
<td>Newspaper and Magazines</td>
<td>3</td>
</tr>
<tr>
<td>Medical Literature</td>
<td>1</td>
</tr>
</tbody>
</table>

* Two subjects named more than one source.
Table 3. Reasons Subjects Received Continuous Ambulatory Peritoneal Dialysis

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary Choice Between CAPD and Hemodialysis</td>
<td>8</td>
</tr>
<tr>
<td>Complications on Hemodialysis</td>
<td>1</td>
</tr>
<tr>
<td>Recommendation of Physician</td>
<td>1</td>
</tr>
<tr>
<td>Distance to the Dialysis Center and Convenience for Family</td>
<td>1</td>
</tr>
</tbody>
</table>

Total 11
Results of the Personal Interview

Scores and Means

The 11 subjects were interviewed using the personal interview. The interviews lasted 20 to 90 minutes depending on the individual interviewed.

The range of life change item total scores of the subjects in this study was 21 to 63 with a mean score of 44.3 (Table 4). Total possible scores could range from 17 to 102 if the subjects answered all items; most did not. The mean score for the individuals' responses to the interview items was obtained by dividing the subjects' total scores by the total number of items they responded to. The individual mean scores ranged from 1.5 to 4.5, with an overall mean of 3.1 for the sample. Eight of the subjects indicated the overall direction of change in their lives was for the better since receiving Continuous Ambulatory Peritoneal Dialysis. Three indicated the overall direction of change was for the worse.

Current life satisfaction ratings were obtained from the sample. The range of current life satisfaction ratings of the subjects was from three to 10 with a mean score of 6.6 (Table 4).

Individual Item Scores and Means

Total scores, means, and direction of change were obtained for 14 out of the 17 items of the interview. The life change items concerning employment of relationships with associates at work, job performance and job satisfaction were not included in this analysis as they were only answered by two subjects.
Table 4. Distribution of Subjects' Life Change Scores, Direction of Change and Current Life Satisfaction Scores

<table>
<thead>
<tr>
<th>Life Change Score</th>
<th>Life Change Mean Score</th>
<th>Direction of Change</th>
<th>Current Life Satisfaction Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>63</td>
<td>4.5</td>
<td>Worse</td>
<td>5</td>
</tr>
<tr>
<td>61</td>
<td>4.4</td>
<td>Worse</td>
<td>5</td>
</tr>
<tr>
<td>58</td>
<td>4.1</td>
<td>Better</td>
<td>7</td>
</tr>
<tr>
<td>57</td>
<td>4.1</td>
<td>Better</td>
<td>8</td>
</tr>
<tr>
<td>60</td>
<td>3.5</td>
<td>Worse</td>
<td>3</td>
</tr>
<tr>
<td>46</td>
<td>3.5</td>
<td>Better</td>
<td>5</td>
</tr>
<tr>
<td>42</td>
<td>3</td>
<td>Better</td>
<td>8</td>
</tr>
<tr>
<td>32</td>
<td>1.9</td>
<td>Better</td>
<td>10</td>
</tr>
<tr>
<td>24</td>
<td>1.7</td>
<td>Better</td>
<td>7</td>
</tr>
<tr>
<td>23</td>
<td>1.6</td>
<td>Better</td>
<td>8</td>
</tr>
<tr>
<td>21</td>
<td>1.5</td>
<td>Better</td>
<td>6</td>
</tr>
</tbody>
</table>

Mean Score:

44.3 3.1 6.6
The range of total scores of the life change items was 20 to 50 (Table 5). The mean scores of the change items ranged from 1.8 to 4.6. The subjects indicated that the overall direction of change for eight of the life change items was in the direction for the better; the overall direction of change for three was in the direction for the worse (Table 5).

The life change items of relationships with associates at work, job performance and job satisfaction were answered by two subjects who were employed at the time of the interview. Both subjects indicated no change in relationships with associates at work. Both subjects indicated a change in job performance; one indicated a change for the better because he did not tire easily with CAPD and one indicated a change for the worse as he became tired more easily since he had begun CAPD. One subject indicated no change to the item of job satisfaction and the other subject indicated a change for the worse because he had not been feeling well.

Means of current life satisfaction ratings were compared between current life satisfaction ratings of subjects who had been on hemodialysis prior to receiving Continuous Ambulatory Peritoneal Dialysis and subjects who had not; married and unmarried subjects; and male and female subjects (Table 6). A mean score of current life satisfaction ratings of 6.3 was obtained from the seven subjects who had received hemodialysis previously; a mean score of seven was obtained from the four subjects who had not received hemodialysis previously.
Table 5. Distribution of Each Life Change Item Total Score, Mean Score and Direction of Change for the Total Sample *

<table>
<thead>
<tr>
<th>Life Change Item</th>
<th>Total of Scores</th>
<th>Mean</th>
<th>Direction of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Appearance</td>
<td>34</td>
<td>3.1</td>
<td>Worse</td>
</tr>
<tr>
<td>Style of Dress</td>
<td>35</td>
<td>3.2</td>
<td>Worse</td>
</tr>
<tr>
<td>Physical Endurance</td>
<td>45</td>
<td>4.1</td>
<td>Better</td>
</tr>
<tr>
<td>Sense of Independence</td>
<td>44</td>
<td>4</td>
<td>Better</td>
</tr>
<tr>
<td>Decision Making</td>
<td>32</td>
<td>2.9</td>
<td>Better</td>
</tr>
<tr>
<td>Sense of Achievement</td>
<td>34</td>
<td>3.1</td>
<td>Better</td>
</tr>
<tr>
<td>Relationships with Family</td>
<td>36</td>
<td>3.3</td>
<td>Better</td>
</tr>
<tr>
<td>Relationships with Health Professionals</td>
<td>26</td>
<td>2.4</td>
<td>Better</td>
</tr>
<tr>
<td>Relationships with Friends</td>
<td>23</td>
<td>2.3</td>
<td>Better</td>
</tr>
<tr>
<td>Financial Situation</td>
<td>23</td>
<td>2.1</td>
<td>Worse</td>
</tr>
<tr>
<td>Hobbies or Recreational Activities</td>
<td>33</td>
<td>3</td>
<td>Better</td>
</tr>
<tr>
<td>Social Activities (Including Religious Group Involvement)</td>
<td>20</td>
<td>1.8</td>
<td>Better</td>
</tr>
<tr>
<td>Change in Life Satisfaction Since CAPD Began (Past)</td>
<td>50</td>
<td>4.6</td>
<td>Better</td>
</tr>
<tr>
<td>Outlook Toward the Future</td>
<td>37</td>
<td>3.4</td>
<td>Better</td>
</tr>
</tbody>
</table>

*Life Change Items of Relationships with Associates at Work, Job Performance and Job Satisfaction not included.
Table 6. Mean Scores of Current Life Satisfaction Ratings of Select Groups of the Sample

<table>
<thead>
<tr>
<th>Select Group</th>
<th>Mean Score of Current Life Satisfaction Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects on Hemodialysis Previously</td>
<td>6.3</td>
</tr>
<tr>
<td>Subjects Not On Hemodialysis Previously</td>
<td>7</td>
</tr>
<tr>
<td>Married Subjects</td>
<td>6.6</td>
</tr>
<tr>
<td>Unmarried Subjects</td>
<td>6.5</td>
</tr>
<tr>
<td>Male Subjects</td>
<td>6.1</td>
</tr>
<tr>
<td>Female Subjects</td>
<td>7</td>
</tr>
</tbody>
</table>
A mean score of 6.6 was obtained from the nine married subjects with a mean score of 6.5 by the two unmarried subjects. The mean score of the six male subjects of the sample was 6.1 and a mean score of seven was obtained from the five female subjects.

Verbal Responses

There were varied responses by the subjects in this study to each life change item in the interview. A summary of the responses follows.

The first life change item dealt with physical appearance. Four of the subjects indicated a change for the worse citing that they now had a bigger stomach, had gained some weight and that the catheter affected their sexuality and body image. Since they had been receiving Continuous Ambulatory Peritoneal Dialysis, four subjects reported no change and three related a change for the better. These subjects reported that their skin color improved and they had regained some of the weight they had lost prior to starting Continuous Ambulatory Peritoneal Dialysis.

The second life change item dealt with change in the style of dress. Six subjects cited there was a change for the worse because they now had to wear baggier clothes, their clothes had to be made larger, shirts were now being worn outside their pants. Most of these subjects cited that they had liked wearing form-fitting clothes in the past but had to give them up now. Three subjects stated that there had been no change in style of dress. Two stated there had been
improvement because they had lost a great deal of weight and their clothes fit them since they had gained weight after receiving Continuous Ambulatory Peritoneal Dialysis.

Seven of the subjects' responses to the item of physical endurance were in the direction of a change for the better. One subject stated there was an improvement due to an increase in breathing capacity because he was now keeping fluid off with Continuous Ambulatory Peritoneal Dialysis. Three subjects stated that they were doing much better. One subject stated that she had not felt this well in five years because of progressive kidney failure and now she did do much more since receiving Continuous Ambulatory Peritoneal Dialysis. One subject stated that there had been an increase in physical endurance the first few months after beginning Continuous Ambulatory Peritoneal Dialysis, but it currently was lower than it was before on hemodialysis at the time of the interview. One other subject stated that his current level of physical endurance was lower than when he was on hemodialysis prior to receiving Continuous Ambulatory Peritoneal Dialysis; two subjects indicated no change.

The fourth item of the interview dealt with a sense of independence. The overall response by the subjects was positive, with seven subjects stating that they felt much more independent because they did everything themselves and did not have to depend on others. One subject stated that his spouse was freed from running the home dialysis machine. Other subjects stated that they traveled much more
and two subjects stated that they really felt tied down only when they did an exchange. Two subjects indicated there was no change and two indicated there was a change for the worse.

Responses to the item of decision making consisted of four of the subjects stating there had been a change for the better. One of these subjects stated there was an improvement because she felt more secure knowing how to do her own exchanges and that she did not know how to operate the hemodialysis machine. Five of the subjects responded that there had not been a change. Two subjects responded that there had been a change for the worse; one of these subjects related that all decisions were based around the exchanges.

Change in the sense of achievement was the sixth item of the interview. Five of the subjects stated that there had been a change for the better. They stated they were getting more done and two of these subjects stated they were doing more things now in comparison to when they were on hemodialysis. Three of the subjects stated there was no change and three stated that they were not doing the things that they want to do. One of the subjects stated a great deal of change for the worse and that he only made it "day to day."

The seventh item dealt with relationships with family. Five subjects stated that there had been an improvement because they felt better and also because they had more time to spend with their families. Four subjects related that there had been no change. Two subjects related there had been a change for the worse, and one of these subjects cited that he did not go out and do things with them like he used to.
The eighth life change item discussed the subjects' relationships with health professionals since receiving Continuous Ambulatory Peritoneal Dialysis. Seven of the subjects responded there was no change and that the relationships had remained the same. Three subjects related there was a change for the better with one specifically citing that it had been better because she felt more independent now that she was responsible for her own care. One subject stated that there had been a change for the worse.

Four subjects responded there was change for the better for the item of relationships with friends. Reasons cited for the change for the better were because the subjects had more time to see others and were able to get out and meet more people. Five of the subjects cited no change and one reported a change for the worse. Some subjects who stated that there had been no change commented that their friends did not understand that they were not as free as they used to be, they did not get around as much and did not see them like they used to. One subject did not respond to this item.

Eight of the subjects' responses to the item of financial situation were no change. One subject stated that Continuous Ambulatory Peritoneal Dialysis had been cheaper because of less hospitalization. Two subjects stated the change had been for the worse and one subject cited an increase in trips to the dialysis center. The other subject cited he had been unable to work.

The view of most of the subjects to the item of hobbies or recreational activities was change for the better. Five of the subjects
who indicated a change for the better cited the reasons of being able to travel more and being able to do more activities. Four subjects responded that there had been no change and two subjects responded change for the worse.

Eight subjects related there had been no change in social activities (including religious group activities) since they had been receiving Continuous Ambulatory Peritoneal Dialysis. Two subjects cited a change for the better and stated that this was because they were getting out more and were participating more regularly in church activities. One subject indicated change for the worse.

With the item of change in life satisfaction since CAPD began, eight subjects responded change for the better. Some of these subjects cited that there had been an improvement because they were gradually feeling worse before receiving Continuous Ambulatory Peritoneal Dialysis because of progressive kidney failure. One subject cited the change was for the better as he had more freedom and can drink all he wanted. Another subject related the change was for the better because of freedom from the dialysis machine. One patient related that he was able to get around much better since receiving Continuous Ambulatory Peritoneal Dialysis. Two subjects replied that there had not been a change and one subject related a change for the worse.

Five subjects related that they anticipated change for the better with the item of outlook toward the future. Most of these subjects stated that they felt optimistic about the future. Five subjects did not anticipate change in the future with one of these
subjects stating, "I don't think my condition can get any worse." One subject responded a change for the worse because "you don't look to the future with this disease."

Comments from subjects who responded to the question of rating their current level of life satisfaction were, "I am very satisfied," "I like my flexible schedule, the hemodialysis regimen was not flexible," "It's good and getting better, but there are things I want to do," "It's better than being on hemodialysis" and "I am in the process of improving." Other comments received were, "I can't do things like I used to," "It's not good, because I am not feeling well," and "It has decreased."

The subjects were asked if they would now choose the same type of treatment of Continuous Ambulatory Peritoneal Dialysis. Eight of the subjects replied that they preferred CAPD and hoped to use it as long as they felt well using it. Most of these subjects stated that they hoped that they would not have to go back on hemodialysis. One subject preferred CAPD to hemodialysis but would prefer a transplant to have more freedom and control. One subject was fairly satisfied with Continuous Ambulatory Peritoneal Dialysis but was not feeling well and talked about the possibility of going back on hemodialysis. One subject was not satisfied with Continuous Ambulatory Peritoneal Dialysis because "it is a never-ending process, you have a schedule."

The subjects were also asked the question, "What things are meaningful to you?" Seven of the subjects replied family; seven of the
subjects cited staying alive or keep on living; and four subjects responded religion. Other responses obtained were friends, recreational activities, the need to enjoy the things of life and the accomplishments that they wanted to make.

All of the subjects were receptive to the interview. They all responded openly to share their personal view of life on Continuous Ambulatory Peritoneal Dialysis.
CHAPTER 5

DISCUSSION AND RECOMMENDATIONS

This chapter discusses the findings in relation to the conceptual framework and literature review, conclusions, implications for nursing and recommendations for future studies.

Findings in Relation to the Conceptual Framework and Literature Review

The concepts of chronic illness, treatment, life change and current life satisfaction comprised the conceptual framework for this study. The conceptual framework described the relationship of treatment of chronic renal failure with Continuous Ambulatory Peritoneal Dialysis may have on life change and current life satisfaction. Studies have shown that the physiological characteristics of a chronic illness may influence the psychological, social and cultural environments of the individual (Dimond, 1980). Change may occur in these areas as a direct result of the illness and may affect the person's adaptation to the chronic illness. Treatment for the illness may diminish or enhance change in the life of the patient. Assessment of change in patient's life when receiving a specific treatment for a chronic illness should help nurses identify problem areas in the patient's adaptation to the treatment regimen.
This study was conducted to describe change in the various components of life of patients receiving Continuous Ambulatory Peritoneal Dialysis and to obtain ratings of current life satisfaction. All of the patients interviewed indicated that there had been change in their lives since receiving Continuous Ambulatory Peritoneal Dialysis. The lowest possible total score if the subject answered all items of the interview of 17 indicated no change in the patient's life and the highest possible total score of 102 indicated a great deal of change. The range of scores obtained from the subjects was 21 to 63 with a mean score of 44.3 for the patient sample.

Subjects who indicated change in each item in the interview were asked to indicate if the change was for the better or for the worse. Eight of the subjects indicated the overall change in their lives since receiving Continuous Ambulatory Peritoneal Dialysis was for the better and three indicated the overall change in their lives was for the worse.

The individual items of the interview were assessed for change by the total patient sample. The three items with the highest total score of life change were change in life satisfaction since CAPD began, physical endurance and sense of independence and all were in the overall direction of change for the better. Overall, the subjects indicated that 11 of the 14 change items of the interview were in the direction of change for the better. The three change items of physical appearance, style of dress and financial situation were the items that received an overall rating by the population to be in the direction of change for
the worse. The finding of change for the worse in the item of financial situation was similar to a finding of a study conducted by Wynbrandt (1975) of life satisfaction of patients receiving hemodialysis. The patients of his study reported a decrease in their income after they began receiving hemodialysis.

Current life satisfaction ratings were also obtained from the sample with a scale of 1 to 10 with 1 indicating low current life satisfaction and 10 indicating high current life satisfaction. The range of current life satisfaction scores was from 3 to 10 with a mean of 6.6 for the sample. A study conducted by Cantril (1965) to determine current life satisfaction of patients receiving hemodialysis used the same scale as in this study to determine ratings of current life satisfaction. The Cantril study revealed that the average score of current life satisfaction of a sample of patients receiving hemodialysis was 5.5 and a sample of the normative population of the United States population had an average score of seven. Using these indicators, the mean score of current life satisfaction of 6.6 of the subjects who received Continuous Ambulatory Peritoneal Dialysis in this study resembled the current life satisfaction ratings of the normative group of the United States population more closely than the ratings of the patients receiving hemodialysis in the Cantril study. This finding resembled the finding by Burton, et al. (1981) that patients who received Continuous Ambulatory Peritoneal Dialysis saw themselves as less in the role of sick and handicapped.
The results of this study showed that the overall direction of life change in the subjects' lives may have a relationship with their perception of current life satisfaction. Three out of the four subjects who indicated the lowest life satisfaction scores were the three subjects of the sample who indicated that the overall change of their lives was for the worse.

A great deal of change may have affected the overall direction of change of the subjects' lives. This was supported by the finding that three of the five highest life change scores and individual life change mean scores were from the three subjects who indicated an overall change for the worse in their lives.

Means of current life satisfaction ratings were compared between subjects on hemodialysis prior to Continuous Ambulatory Peritoneal Dialysis and subjects who had not; between married and unmarried subjects; and between male and female subjects. A higher current life satisfaction rating mean was obtained by the subjects who had not received hemodialysis prior to Continuous Ambulatory Peritoneal Dialysis, by the married subjects and the female subjects of the sample.

The findings of a higher current life satisfaction mean rating by the married patients were similar to the results of the life satisfaction study of old age conducted by Neugarten, et al. (1961). They related that lower life satisfaction ratings were reported by unmarried people in their sample. A higher mean rating score of current life satisfaction by the female subjects in this sample correlated with
the results of a study conducted by Levy and Wynbrandt (1975) of patients on hemodialysis. They reported that women were more well-adapted to life on hemodialysis than men.

Cantril (1965) reported that in his study of life satisfaction of patients receiving hemodialysis and a sample of the normative population of the United States that hope, a component of life satisfaction, was displayed by both groups. This was measured by rating the future as the same or higher than the present and not indicating that they were resigning themselves to a deteriorating future. This was also seen in the sample of this study; five subjects indicated a change for the better for the future; five subjects did not anticipate a change; and only one subject anticipated a change for the worse.

The eight subjects who indicated that the overall change in their lives was for the better all responded that they would now choose the same type of treatment of Continuous Ambulatory Peritoneal Dialysis. Of the three subjects who indicated the overall change in their lives was for the worse, two subjects indicated that they might chose an alternative therapy and one of these subjects stated that he had not felt well shortly after receiving Continuous Ambulatory Peritoneal Dialysis. The third patient responded that he did not like the continuous ongoing regimen of Continuous Ambulatory Peritoneal Dialysis.

In summary, the treatment of Continuous Ambulatory Peritoneal Dialysis did affect the lives of all of the subjects in this study. This form of treatment affected various aspects of the subjects' lives and possibly their perception of life satisfaction.
Conclusions

Few solid conclusions can be drawn from this study. From this study, it can be suggested that a patient may experience change in his life when receiving Continuous Ambulatory Peritoneal Dialysis. The change may be for the better in some areas, depending on the circumstances of the individual. From this study, nursing can be aware that patients may encounter some difficulty in adjustment in the areas of physical appearance, style of dress and financial situation when receiving Continuous Ambulatory Peritoneal Dialysis.

Implications for Nursing

An unexpected finding of this study was that of the seven subjects who indicated that they initially learned of Continuous Ambulatory Peritoneal Dialysis from a nurse; five listed a nurse as their primary source. Nurses should be aware of the importance of their role as a member of the health care team in the area of patient education for advancements in medical treatments.

Nurses should also be aware that the person who will be receiving Continuous Ambulatory Peritoneal Dialysis may experience change in various aspects of his life. These changes may affect the person's adaptation to life on Continuous Ambulatory Peritoneal Dialysis. This information can serve as a foundation for nurses to assess and plan interventions for these patients. Nurses who are aware of these changes can identify and discuss problem areas with patients prior to and periodically after receiving Continuous Ambulatory Peritoneal Dialysis.
Recommendations

1. Further testing of the modified personal interview used in this study for validity and reliability.

2. Use of a larger sample to make the results more generalizable.

3. Conduct a longitudinal study of patients when they initially begin receiving Continuous Ambulatory Peritoneal Dialysis and six months later.

4. Conduct a study comparing current life satisfaction ratings and degree of life change between patients receiving Continuous Ambulatory Peritoneal Dialysis and patients receiving hemodialysis.
APPENDIX A

LETTER OF APPROVAL FOR STUDY

THE UNIVERSITY OF ARIZONA COLLEGE OF NURSING
MEMORANDUM

TO: Julie Klein

250 N. Arcadia #1113, Tucson 85711

FROM: Ada Sue Hinshaw, R.N., Ph.D. - Margarita Kay, R.N., Ph.D.
Director of Research - Chairman, Research Committee

DATE: October 12, 1981

RE: Human Subjects Review: "Life Satisfaction of Patients Receiving Continuous Ambulatory Peritoneal Dialysis"

Your project has been reviewed and approved as exempt from University review by the College of Nursing Ethical Review Sub-committee of the Research Committee, and the Director of Research. A consent form with subject signature is not required for projects exempt from full University review. Please use only a disclaimer format for subjects to read before giving their oral consent to the research. The Human Subjects Project Approval Form is filed in the office of the Director of Research, if you need access to it.

We wish you a valuable and stimulating experience with your research.

ASH:ss
1981
APPENDIX B

DISCLAIMER

LIFE SATISFACTION OF PEOPLE ON CONTINUOUS AMBULATORY PERITONEAL DIALYSIS

I am asking for your voluntary participation in this study to find out what people think about different aspects of their lives since they have been receiving Continuous Ambulatory Peritoneal Dialysis (CAPD).

The interview will take about 30 minutes of your time. Your consent as a willing participant will be indicated by your response to the questions. All information received from this study will be treated with complete confidentiality and your name will not be used on the interview to ensure your privacy.

There are no known risks to you if you participate in this study. You may ask questions of the interviewer at any time during this interview. You may withdraw at any time in this study without any effect on your care.

The information received from this study will help nurses and doctors understand the areas of needs of people on Continuous Ambulatory Peritoneal Dialysis.

Thank you for your cooperation.

Julie Klein R.N., B.S.N.
College of Nursing
University of Arizona
APPENDIX C

Demographic Sheet

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| Code Number |
| Age |
| Sex |

Marital Status:
- Married
- Single
- Widowed
- Divorced
- Separated

Who do you live with?
- Alone
- Spouse
- Child or Children
- Friend or Roommate
- Other: Please Specify: __________

How long have you been receiving CAPD?

Had you been on hemodialysis prior to starting CAPD?
If yes, how long?

How did you initially learn about CAPD?
- Nurse
- Doctor
- Patient(s) on CAPD
- Family, friends
- Newspapers, magazines
- TV
- Medical Literature
- Other: Please Specify: __________

Why are you on CAPD?
- Voluntary choice between CAPD and hemodialysis
- Complications on hemodialysis
- Recommendation of physician
- Distance to the dialysis center
- Other: Please Specify: __________

Have you had any complications while you have been receiving CAPD?
If yes, indicate the cause and how many times each:
- Peritonitis ______ times
- Infection around the catheter site ______ times
- Blockage of catheter ______ times
- Catheter falling out ______ times
- Other: Please Specify: __________ __________ times

Beside receiving CAPD, do you have any other medical problems at this time?
If yes, please specify: __________________________
APPENDIX D

PERSONAL INTERVIEW

CODE NUMBER

In this interview, I am interested in what you think about these specific aspects of your life since you have begun Continuous Ambulatory Peritoneal Dialysis. Please relate to me how your life is now that you are undergoing Continuous Ambulatory Peritoneal Dialysis. You will be offered a card with numbers on it. Please choose the number on the card that best corresponds to your present life experience.

PHYSICAL APPEARANCE

STYLE OF DRESS

PHYSICAL ENDURANCE

SENSE OF INDEPENDENCE

DECISION MAKING

SENSE OF ACHIEVEMENT

RELATIONSHIPS WITH FAMILY (SPOUSE, CHILDREN, RELATIVES)

RELATIONSHIPS WITH HEALTH PROFESSIONALS

RELATIONSHIPS WITH FRIENDS

57
IF YOU WORK:
RELATIONSHIPS WITH ASSOCIATES AT WORK

JOB PERFORMANCE

JOB SATISFACTION

FINANCIAL SITUATION

HOBBIES OR RECREATIONAL ACTIVITIES

SOCIAL ACTIVITIES (INCLUDING RELIGIOUS GROUP INVOLVEMENT)

CHANGE IN LIFE SATISFACTION SINCE CAPD BEGAN (PAST)

CURRENT LIFE SATISFACTION

OUTLOOK TOWARD FUTURE

SAME CHOICE OF TREATMENT?

WHAT THINGS IN LIFE ARE MEANINGFUL TO YOU?

Adapted from Young and Longman, 1980
10/81 JK
APPENDIX E
INTERVIEW CARDS

EXAMPLE OF CARD FOR LIFE CHANGE ITEMS

Subject Number ______
Rate the amount and type of change in

No Change  Great Deal of Change

1  2  3  4  5  6

Change for Better  ______
Change for Worse  ______

EXAMPLE OF CARD FOR LIFE SATISFACTION

Subject Number ______
Rate Current Life Satisfaction

Not Satisfied  Very Satisfied

1  2  3  4  5  6  7  8  9  10
LIST OF REFERENCES


