LEVEL OF WELLNESS AS RELATED TO RENAL DISEASE

by

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ABSTRACT

A comparative study was conducted to determine the level of wellness as measured by problem-solving responses as it related to anxiety in eleven chronic hemodialysis patients. Responses were compared from a researcher-designed questionnaire with scores on the IPAT Anxiety Scale Questionnaire.

The purpose of the study was to ascertain how the renal hemodialysis patient copes with a chronic disease and its treatment. The hypothesis that the chronic hemodialysis patient who scored high on the Level of Wellness Questionnaire is regarded as having a higher level of wellness and will have significantly less anxiety was not supported at the .05 level of significance when the total anxiety score was correlated with the level of wellness score. A covert subscore on the IPAT Anxiety Scale had an inverse relationship with the level of wellness score and was significant at the .05 level whereas the overt subscore did not have a significant negative correlation.

The researcher-designed tool for this study warrants further investigation. It may be useful in identifying covert anxiety in renal patients, a problem that merits nursing intervention.
CHAPTER I

THE PROBLEM AND HYPOTHESIS TO BE TESTED

Introduction

Kidney failure has been recognized as a chronic disease for years, but it is as recent as the past decade that treatment has been available. Chronic intermittent extracorporeal hemodialysis became practical with the development of the external arteriovenous shunt by Quinton, Dillard, and Scribner in 1960. The shunt enables the patient's blood to be circulated through the artificial kidney simulating the function of the human kidney.

The kidney is a complex organ. When functioning normally, it performs a vital role in maintenance of body functions by removing waste products of metabolism from the blood, and regulating fluid and electrolyte balance. A diseased kidney loses the ability to perform these functions and the physiological changes that occur eventually lead to death.

With the technological advances of the artificial kidney and cannulation for circulation of the patient's blood to the machine, a form of treatment for end-stage renal disease was made available. Although the mechanical function of a machine is not as efficient as the normal human kidney, it has offered a longer life to those accepting the treatment.
The two basic principles involved in the operation of the artificial kidney are osmosis and diffusion. By circulating blood through semi-permeable sheets of cellophane immersed in a bath, excess water and waste products of metabolism can be removed through diffusion and osmosis, a more normal chemical balance is re-established, and the blood is recirculated back to the patient. Blood is carried to the machine through clear, plastic tubing which connects to cannulas in an artery and vein located in the forearm.

In 1966 a major new approach for shunting the blood to the artificial kidney was introduced. Brescia and his associates (1966) described a surgically created arteriovenous fistula. With this anastomosis, usually between the radial artery and an adjacent vein, venous blood flow in the forearm increased to the point where flow rates in excess of 200 ml per minute could be delivered to the artificial kidney by means of a venipuncture and returned through another venipuncture site. Although there are an increased number of fistulas being used, many patients continue to dialyze by cannulation with an external shunt.

The feasibility of performing hemodialysis in the home was first introduced in 1963. In the United States, cost of hospital space, personnel, supplies, and medical care ranged from $12,000 to $66,000 per patient; a shift to the home environment became economically expedient (Blagg, 1970). Home training programs were initiated and early results
indicated that selected patients and their families could independently handle dialysis.

**Statement of the Problem**

One major question guided the present study: To what extent does a chronic renal hemodialysis patient's problem-solving responses, as measured by a researcher-designed questionnaire judged to measure his level of wellness, relate to his scores on the Institute for Personality and Ability Testing (IPAT) Anxiety Scale?

**Significance of the Problem**

Chronic kidney disease is the fourth leading health problem in this country (National Kidney Foundation, 1972). In the United States some 5000 people each year develop end-stage kidney disease for which maintenance hemodialysis or kidney transplantation is an appropriate treatment. In 1963 about 300 persons were receiving long-term dialysis; by July 1, 1971, this figure had increased to 4400. The population of home hemodialysis patients also increased. In 1968, there were 300 people performing home treatment; in the next two years this increased fivefold (Gutch and Stoner, 1971). End-stage kidney disease necessitates life-time treatment for survival.

The chronicity of renal disease which leads to renal failure or end-stage disease results from non-reversible pathological alterations. As a chronic disease, it is
characterized by permanency, residual disability, and requiring training for rehabilitation (Phillips, 1956).

The magnitude of chronic illness tends to point up its significance in human terms, and its meaning to the particular patient and his family. Discouragement, defeat of plans and hopes for the future, economic insecurity, lowering of living standards, exhaustion of savings, all of these are frequent concomitants of renal failure disease. Years added to one's life must offer more than prolonged biological existence (Field, 1967). The attempt of this study to determine level of wellness in relation to anxiety may help to determine problem areas that the individual can be assisted with to recognize the problem and cope with it effectively to obtain a fuller and more complete existence.

**Hypothesis to be Tested**

The following hypothesis was tested in this study: The chronic renal hemodialysis patient who scores high on the researcher-designed questionnaire to measure problem-solving is regarded as having a higher level of wellness and will have significantly less anxiety as measured by the IPAT Anxiety Scale.

**Purpose of the Study**

The purpose of the study was to interview and compare chronic renal hemodialysis patients regarding their level of wellness as measured by problem-solving responses and anxiety.
Specifically, the study attempts to ascertain how well the renal hemodialysis patient copes with a chronic disease. This consideration has importance because of the increasing number of patients who enter hemodialysis programs each year and the preparation of these patients by the professional nurse teaching the technical aspects of their treatment, assisting them in identifying anxiety, and supporting them in effective management of that anxiety.

**Conceptual Framework**

The general framework within which the research is conducted is Dunn's (1961) theory of high level wellness and Lazarus' (1966) psychological stress theory. Dunn's (1961) theory considered high level wellness as "an integrated method of functioning which is oriented toward maximizing the potential of which the individual is capable, within the environment where he functions" (p. 4). Dunn described a concept of the physical and psychological interrelatedness of one's development that maximizes the person's potential within his physical and mental limitations to dynamically progress forward. To consider the chronically ill patient with renal failure within the framework of Dunn's theory, the researcher suggests that the level of wellness evolves through the patient's response to his disease. Anxiety, or psychological stress may often be the response to unfamiliar situations in which the individual has no experienced coping mechanisms.
Lazarus (1966) proposed the theory that psychological stress is the response to significantly threatening situations. The exact response of stress or anxiety as it is described depends upon the way the threatened organism perceives the situation.

Plans for the future by the chronic renal hemodialysis patient often are interrupted by the effects of the disease. The necessity of change may be responded to by a defense of denial as an anxious response when one is unable to rely on usual modes of coping. If the difficulties of change have been met with a conscious attempt to manage them in a problem-solving manner, the individual has maximized his potential to progress to an increased level of wellness.

Renal failure cuts across the patient's established pattern of living and compels him to formulate an altered way of life which is governed by the requirements of his particular illness (Field, 1967). For example, the renal failure patient has three scheduled hemodialysis treatments a week that are of six to eight hours duration. Implicit to this treatment is the concept that the person is placed in a dual position of independency-dependency. An anxious response to the independent-dependent role may be denial (Abram, 1970) or partial adherence to the medical regime. Such responses are understandable when considering the value that society places on independency and health.
In society, the belief exists that adulthood means independence; socially, economically, and emotionally. Through the maintenance of independence, the adult gains status in his own estimation and in the eyes of those who form his life space. The most commonly accepted standard for independence and status is through the traditional role of breadwinner and/or homemaker. These assure for the individual approval and esteem from other members of the family (Field, 1967). Physical intolerance or physical limitation from renal disease may result in discontinuance of the duties of breadwinner or homemaker. The effect of loss or change of employment upon the individual's role in the family is often met with anxiety. Such a situation is perceived as a threat since it is to the members of the family that the individual looks for approval, love, and respect (Caplan, 1961). If the individual has stability through family support as suggested by Johnson et al. (1966), acceptance as a response to the disease and its effect is most probable.

A hierarchical interpretation of responses can be considered. While an anxious response implies no acceptance, open acceptance indicates knowledge of the reality of the situation. Progress to a third higher level in which the individual uses his abilities effectively to carry out a plan of action in relation to a problem is identified as a problem-solving response.
Assumptions

The design of the study rests upon the following assumptions:

1. The chronic renal hemodialysis patient experiences varying degrees of anxiety for as long as treatment continues, or until a successful renal transplant has been performed.

2. The patients who compose the sample in this study received approximately the same medical care.

Definitions

The following definitions of terms were used for the purpose of this study:

1. **Anxiety**: "A sociopsychophysiologic phenomenon experienced as a foreboding dread or threat to the human organism . . . the sources of which may be conscious or unconscious" (Lesse, 1970, p. 13).

2. **Artificial kidney**: The artificial kidney is an apparatus designed to remove waste products from the blood which are usually excreted in the urine, by means of diffusion across a semi-permeable membrane outside the body.

3. **Diffusion**: The physical process of movement of molecules from an area of higher to lower concentration.
4. **End-stage kidney disease:** The reduction of kidney excretory function to a measured glomerular filtration clearance of five cc per hour or less.

5. **Hemodialysis:** A process of cleansing the blood of metabolic waste and increased water and electrolyte concentrations by means of circulating the blood through the artificial kidney. Other terms referring to hemodialysis are: extracorporeal hemodialysis, home hemodialysis, and dialysis.

6. **High level wellness:** "An integrated method of functioning which is oriented toward maximizing the potential of which the individual is capable, within the environment where he functions" (Dunn, 1961, p. 4). In this study high level wellness is measured by the degree of problem-solving by the patient.

7. **Osmosis:** The movement of water through semi-permeable membrane that separates two solutions of different concentrations.

**Types of Responses**

1. **Accepting response** is the understanding the patient has of the reality of the situation.

2. **Anxious response** is a defense that a person uses consciously or unconsciously to protect his self-concept such as denial, anger, or aggression when confronted
with a threat that can be situationally-determined or relatively independent of the immediate situation.

3. **Problem-solving response** is the conscious progression through a problem with a plan that is devised independently or with assistance from someone.

**Limitations**

The study was restricted by the following factors:

1. The size of the sample used;

2. The sample of patients for the study were selected from only two localities;

3. The inherent element of subjectivity in patient report;

4. The inability to control for age in the sample.
CHAPTER II

REVIEW OF LITERATURE

Literature reviewed for this study pertained to the patient's and his family's reaction and adjustment to long term therapy with hemodialysis. Responses to such treatment are variable from person to person as the response is dependent upon how the individual perceives the situation.

Psychological Considerations of Reactions to Chronic Disease and Hemodialysis

In 1965 Shea and her co-workers published the first study of psychological responses to chronic hemodialysis. Their report summarized experiences with nine patients who were interviewed regularly over a period of two and one-half years and included observations of their first four patients in the program at Georgetown University Medical Center, Washington, D. C. From the subjective point of view of the patient, Shea et al. (1965) noted that the need for chronic hemodialysis possibly represented the greatest obstacle to successful rehabilitation. In observing patient responses, these researchers reported two schizophrenic episodes, one psychotic depression, and a number of severe neurotic depressive reactions in the series of the nine patients.
Shea et al. (1965) documented patient responses before, during, and after the treatment of hemodialysis. Reactions to the cannula, artificial kidney machine, restricted diet, and peer association were also described in the study. Most patients experienced some restlessness and increased irritability before dialysis. The researchers reasoned some of these responses to be caused by the renal failure condition, but noted that apprehension and irritability occurred even in the well-controlled patients who had been in the program for several months.

The most anxiety-producing moments during dialysis occurred at the beginning and end of the dialysis, when the shunt was disconnected from the cannula. This part of the procedure was watched with frightened expression, or avoided by covering the eyes, or focusing vision on a remote object in the room. The actual period of dialysis was described by the patients as boring and tiring.

After dialysis, temporary physical weakness and lethargy from salt and water loss was usually accompanied by a listless emotional tone, yet relief that the procedure was over. Even after experiencing several dialyses, there was an expressed anticipation by the patients that they would feel much better than they ever actually did.

Shea et al. (1965) noted that patients tried but never quite accepted the shunt as an integral part of themselves. The shunt was perceived as a constant reminder of
their condition and their dependency on the artificial kidney machine. The patients seemed less able to verbalize their reactions toward the dialyzer. One patient could discuss the "machine" at length. He was a chemist who employed intellectualization as one of his major defense mechanisms. His remarks were made with isolation of affect.

Excessive ambivalence was manifested toward the dietary regime. Although the patients expressed a clear understanding of their diet and a willingness to follow it, there was a considerable amount of dietary indiscretion. Dietary indiscretions were found many times to be anxious responses to threatening situations such as shunt complications of clotting or infections (Shea et al., 1965).

Chronic dialysis patients were found to seek each other out and gave each other a kind of emotional support and understanding that no one else could seem to offer. With death of one patient, agitation and marked depression was observed in the other patients (Shea et al., 1965).

Beard (1969) discussed the fear of death and the fear of life in dialysis patients. Beard's patients became afraid of dying when they learned about the seriousness of their renal disease. The next reaction by most of the patients was denial of the fear by denying that they had a serious disease. Following the period of denial, feeling of discouragement, and depression with feelings of hopelessness were observed. The fear of living an unsatisfactory
life as a chronically ill person seemed almost as intolerable as the fear of death. Beard noted that the patients who made the best adjustment to their disease and coped with the uncertainty of their future were those who had the best ability to interact with others and who had a close relationship with someone to whom they could communicate their feelings in times of stress.

In Seattle, Washington, where one of the earliest kidney programs in the country was established, Wright, Sand, and Livingston (1966) systematically studied twelve patients in the program over periods of six to thirty-six months. They identified a variety of anxiety producing situations. These were outlined as follows: (1) actual or threatened losses of parts of body or body functions; (2) loss of membership in groups; (3) failure of plans or ventures; (4) changes in way of life and living; (5) loss of home, possessions, or financial status; (6) loss of job or occupation; (7) injury or threat of injury; and (8) frustrations in drives. In studying the patient's reaction to stress, the researchers noted that either the patient utilized the defensive mechanisms of denial or projection, and/or that they showed signs of being depressed. The majority of the patients saw other kidney patients as having more trouble than they did themselves.

Johnson and his colleagues (1966) reported their findings in a medical report of ten patients treated at the
Mayo Clinic. Their patients made a remarkably good adjustment to the restrictive and stressful mode of life with chronic dialysis. None required psychotherapy or drugs to alleviate anxiety or depression. Johnson emphasized the importance of an emotionally stable home environment and a high degree of motivation toward a specific goal as essential prerequisites for successful adjustment to long-term therapy.

Sand, Livingston, and Wright (1966) reported that only two of their twenty-three patients made a poor adjustment to dialysis. Conclusions from the study were that patients with higher intelligence, less defensive attitudes about admitting to emotional difficulties, less reliance on emotional defenses that are manifested by physical symptoms, and those who received more satisfactory emotional support from family members adapted most successfully to dialysis.

Abram (1969) described several phases in a patient's adaptation to dialysis. Before the first treatment, the patient shows central nervous system manifestations of uremia: fatigue, apathy, drowsiness, and instability of physical and psychological responses. During the first to third weeks of dialysis, there is a shift to physiological equilibrium. The apathy lessens. A euphoric reaction was observed as the patient realized that he was given a reprieve. Anxiety is also seen during this period. By the third to fourth week, a state of equilibrium was reached and the patient faced the reality of the situation. Depression often
appeared as the problems of living with dialysis became apparent. It took a patient six months to a year to reach a level of satisfactory adaptation to the rigors of dialysis. Abram (1969) also observed anniversary reactions, when he noted that patients had increased anxiety close to the end of the first year of dialysis.

Much of the anxiety described in the literature referred to maladjustment. MacElveen (1970) noted that varying degrees of adjustment from different programs are related to: (1) the type of patient selected; (2) the general management of patient's atmosphere for the dialysis procedure and attitude of the staff; (3) the type of training for the patient; (4) the frequency and quality of support; and (5) the degree of cooperation between patient, family, and staff.

Responses of Aggression and Anger

De-Nour, Shaltiel, and Czaczkes (1968) believed that the dependency connected with being a dialysis patient creates aggressive feelings which cannot be expressed. They pointed out that the patients are dependent on a machine for life, on those who help them, and on a society that pays for the treatment that they themselves cannot afford. Because of these reasons De-Nour et al. concluded that defenses are mobilized against aggression.

Dialysis patients are confronted by a number of anger-provoking situations. At best there are limitations on
their functioning. They often have financial problems and insecurity with respect to jobs. Complications with their disease and with the treatment occur, many of which cause pain and other physical symptoms. Thus, anger is an important effect in dialysis patients (Halper, 1971). It is important for patients to feel free to express their feelings about pain, discomforts, and frustrations connected with dialysis. Freedom to express anger can be uncomfortable for others, but is therapeutic for patients in reducing the level of emotional tension.

**Response of Denial**

Denial was observed in some patients when they were told that they had a fatal illness and would die unless they had repeated treatments with the artificial kidney (Halper, 1971). Physicians found that they had to repeatedly explain aspects of the treatment that they thought the patient already understood. They came to realize that the patients could accept only small amounts of such monumental information about renal failure and the medical treatment that is required.

Denial of certain aspects of reality or denial of feelings about unpleasant experiences was also observed in the course of dialysis (Halper, 1971). These patients may have a collection of medical problems in addition to their chronic renal failure. Infections can develop, hypertension
is a common sequelae, peripheral neuropathy, anemia, and secondary hyperparathyroidism with bone disease are also observed complications. At times denial may protect patients from emotional decompensation (Halper, 1971). If denial is used to such an extent that medical care is ignored, this becomes an indication for encouraging the patient to talk about painful thoughts and feelings.

Short and Wilson (1969) described the roles of denial in chronic dialysis. They pointed out that the capacity for denial in these patients is phenomenal. Although the patients accept their condition and inevitability of their outcome, they deny what is happening to them at the present time. In view of this, these researchers suggested that it may be desirable to allow these patients to maintain their capacity to repress in order to cope with their life situation.

**Dependency-Independency Conflicts**

Dependency upon the treatment regime is a relatively constant finding among dialysis patients. Being dependent on a machine means not only being attached to it, but being addicted to it. Keeping the shunt clean and staying on a restricted diet also impose dependency. The patient receives conflicting messages. He must cooperate with the program, and at the same time be independent in his work and family relations.
The patient may react by accepting the dependency and independency requirements. If he is threatened by the dialysis situation and has unresolved dependency needs, he may not be able to give up the sick role. On the other hand, the patient who is too threatened by dependency cannot accept the program (Abram, 1970).

**Employment Status**

Katz (1970) reported that more than 50 percent of the patients who had been quite ill at the beginning of treatment were either working or being retrained for gainful employment. Patients who were in physically demanding occupations before the necessity of hemodialysis treatment had to give up such work. Conversely, patients in professional, technical, and clerical positions have had to give up or change their occupations much less frequently.

**Family Response to Hemodialysis**

The degree of role modification enforced on the patient by his disability might be indicative of the amount of stress that the family will encounter; the amount of anxiety they have will affect the amount of support the patient receives from his family. Pendras and Erickson (1966) reported: "In some cases, a patient may be required to change not only his lifelong employment, but in a broad sense, his whole life. In this setting he needs a good deal of support to help him make the necessary adjustment."
Therefore, unless this broad approach is encountered, patients may be provided a new life without any help or support in learning to live it" (p. 309). Kossoris (1970) noted that "The individual can change and adjust to his condition in a healthy manner only when his family system allows it" (p. 1731). The family is described as a relationship in which the whole is greater than the sum of its parts and that as a group it performs in its own particular patterns.

MacElveen (1970) found in her study of the sociological triad of the home dialysis patient, his family, and the medical staff, these dynamics: (1) identification of common goals and a means to achieve them, (2) accuracy of mutual perception, and (3) a level of trust. All dynamics identified related highly to the physical, medical, and psychosocial aspects of patients' experience in home hemodialysis treatment.

**Summary**

The review of the literature uncovered two commonalities: (1) the emphasis of less than satisfactory adjustment in chronic hemodialysis treatment, and (2) the lack of follow-up studies with the same patients. The types of anxiety responses most often described were anger or hostility and denial. In some instances the defensive response was considered by the author to be an advantageous protective device for the patient. If used to an extent that the
defensive response interfered with the medical program and life pattern of the patient, it was viewed negatively.

The dependent-independent conflict was described by Abram (1970) as an unsatisfactory coping process of dependency when it related to unresolved dependency needs which perpetuated the sick role. Katz's (1970) report concerning preparation for and actual employment of half of the patients who were very ill at initial time of treatment indicated satisfactory adjustment in terms of employment as a major factor of independency.
CHAPTER III

DESIGN OF THE INVESTIGATION

This chapter includes a description of the design of the study, the measurement tool, the methodology used in conducting the study, and the method used in analyzing the data.

Design of the Study

This study used a comparative design in an attempt to measure chronic renal hemodialysis patients' problem-solving responses as an expression of his level of wellness. Data collected from a researcher-designed questionnaire were compared with the patient's anxiety level derived from responses to the IPAT Anxiety Scale.

The Sample

The sample for the study consisted of eleven renal dialysis patients. The patients were selected by convenience from two geographical areas: Tucson, Arizona, and El Paso, Texas. Their ages ranged from 22 to 64 years.

Prior to correspondence with the patients in the sample, the investigator requested permission from the attending physician to contact each of the patients. A sample of the letter to the attending physician can be found
in Appendix A. The researcher's initial contact with the individuals for the study was by written correspondence. A sample letter is included in Appendix B. The researcher identified herself, stated the purpose of the survey, assured the subject of anonymity, and enlisted his cooperation. Eleven of the seventeen contacts consented to participate.

Measurement Instruments

The instruments for measurement in this study were a questionnaire developed by the researcher and the IPAT Anxiety Scale questionnaire.

Measure of Level of Wellness

Statements for the questionnaire were obtained from the personal observation of the researcher, the experience of associates, and literature relating to the responses being measured. Nine questions with a choice from three responses were designed to obtain information concerning the chronic renal hemodialysis patient's level of wellness. Questions 1, 2, and 3 elicited responses as to the disease and its limitations. Questions 4, 5, 6, and 9 made inquiry to daily life pattern and the beliefs as to future life pattern; and questions 7 and 8 concerned responses to the treatment of the disease.

The response to each question was categorized as: (1) a defensive response, which was determined to be indicative of anxiety; (2) an accepting response; or (3) a problem
solving response. Rationale for the categorization was that a defensive response may be used consciously or unconsciously to protect a person's self-concept when experiencing anxiety; the anxiety may be situationally determined or relatively independent of the immediate situation. Commonly utilized defenses used in an anxious response are denial, hostility, projection, and displacement. Denial is a defense that is used whereby unpleasant facts, thoughts, or actions are treated by the individual as if they did not exist. The patient who responded to the question of "How are you helped with your dialysis treatment?" with "I don't need any help" may be using denial. Hostility can be described as open anger at someone or something. Generally it is associated with displacement. The anger is perhaps toward the dependency that the artificial kidney machine represents and is displaced on someone or something. The defensive response of projection is attributing one's attitudes or thoughts (which are painful and objectionable) to someone else. The person who says, "nobody likes me" may be projecting his own feelings of insecurity toward others.

Answers that were acceptance responses indicated that the patient accepted the reality of the situation. The presenting problem whether it is immediate or a continuous process is acknowledged.

In problem solving, the patient consciously progressed through the problem with a plan he has devised
independently, or with assistance from someone. The finalized questionnaire is shown in Appendix C.

Measure of Anxiety

The IPAT Anxiety Scale, which is shown in Appendix D, consists of forty questions distributed among five anxiety components. The scores obtained from the scale consist of: (1) a total anxiety score composed of all forty items; (2) a covert or hidden anxiety score composed of the first twenty test items (A score); (3) an overt, symptomatic, or conscious anxiety score composed of the last twenty test items (B score); (4) a lack of self sentiment or defective integration score composed of questions 1-4 and 21-24 (Q3); (5) an ego weakness score composed of items 5-7 and 25-27 (C); (6) a paranoid insecurity score composed of items 8, 9, 28, and 29 (L); (7) a guild proneness score composed of items 10-15 and 30-35 (O); and (8) a frustration tension or id pressure score composed of items 16-20 and 36-40 (Q4).

The IPAT Anxiety Scale Questionnaire is based on extensive statistical, factor analytic research with normal and clinical cases leading to a knowledge of anxiety structure. The test is in self-administering form (Cattell and Scheier, 1963).

Pilot Study

Two patients were included in the study as a pilot sample. The purpose of the pilot study was to test the
content validity of the questionnaire specifically for the
time involved and for the understanding of the items by the
patient. No item revisions were indicated, thus the data
from the pilot sample were included in the study.

Data Collection

Data were collected in an interview with each of the
eleven respondents in the two selected localities. Following
written correspondence (see Appendix B) each patient was
contacted by telephone to determine if they were willing to
participate, and if so to make arrangements for the interview.
Upon arriving at the patient's home, the researcher intro­
duced herself. After acquainting herself with the patient, a
description of the questionnaires and instruction for answering
the questions was given, and the consent form was presented
for signature. A sample of the consent form can be found in
Appendix E. The anonymity of the information was assured, and
spontaneity of responses for both instruments was encouraged.

Data Analysis

A scaling technique for the researcher-designed ques­
tionnaire was used to analyze the raw data. Researcher-
derived response categories were assigned numbers for scoring
purposes. Anxious responses received a score of one, ac­
cepting responses were scored as two, and problem-solving
were scored as three. A maximum score of 23-27 determined a
higher level of wellness as expressed through responses reflecting problem-solving in coping with chronic illness.

The IPAT Anxiety Scale Questionnaire was scored according to the manual directions. The data for each of the two questionnaires were recorded on processing cards for computer analysis. A total score from the Level of Wellness Assessment Questionnaire was correlated with the total score from the IPAT Anxiety Scale Questionnaire, and the two sub-scores of Covert Anxiety and Overt Anxiety.
CHAPTER IV
PRESENTATION AND ANALYSIS OF DATA

This chapter presents the findings and the statistical analysis of the data collected from the study described in preceding chapters. First, sample characteristics are given. This is followed by a section on the results of the item analysis of the Level of Wellness Scale. Next, the data related to the stated hypothesis are presented. The final section of the chapter compares the results of the IPAT Anxiety Scale with national averages, as given by the Institute for Personality and Ability Testing. Subsequent chapters discuss the interpretation of these findings and give recommendations for further study.

Characteristics of the Sample

The biographical data obtained for the patients in the study are summarized in Table 1. The subjects were four males and seven females with a mean age of 47 years and a standard deviation of 14. The mean length of treatment for renal failure was 27 months with a standard deviation of 11.7. Employment outside of the home was computed in hours per week. Two patients were employed full-time, two worked thirty hours per week, two worked twenty hours per week, and
<table>
<thead>
<tr>
<th>Subjects</th>
<th>Age years</th>
<th>Sex</th>
<th>Length of Treatment months</th>
<th>Marital Status&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Employment hours/week</th>
<th>Treatment Location</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>48</td>
<td>F</td>
<td>36</td>
<td>M</td>
<td>housewife</td>
<td>home</td>
<td>high school</td>
</tr>
<tr>
<td>2</td>
<td>33</td>
<td>F</td>
<td>12</td>
<td>M</td>
<td>housewife</td>
<td>center</td>
<td>elementary</td>
</tr>
<tr>
<td>3</td>
<td>58</td>
<td>F</td>
<td>33</td>
<td>M</td>
<td>40</td>
<td>home</td>
<td>high school</td>
</tr>
<tr>
<td>4</td>
<td>61</td>
<td>M</td>
<td>26</td>
<td>M</td>
<td>40</td>
<td>home</td>
<td>elementary</td>
</tr>
<tr>
<td>5</td>
<td>56</td>
<td>F</td>
<td>36</td>
<td>W</td>
<td>30</td>
<td>home</td>
<td>higher education</td>
</tr>
<tr>
<td>6</td>
<td>22</td>
<td>F</td>
<td>36</td>
<td>S</td>
<td>30</td>
<td>home</td>
<td>high school</td>
</tr>
<tr>
<td>7</td>
<td>56</td>
<td>M</td>
<td>40</td>
<td>M</td>
<td>unemployed</td>
<td>home</td>
<td>elementary</td>
</tr>
<tr>
<td>8</td>
<td>29</td>
<td>M</td>
<td>18</td>
<td>M</td>
<td>20</td>
<td>home</td>
<td>high school</td>
</tr>
<tr>
<td>9</td>
<td>64</td>
<td>F</td>
<td>36</td>
<td>M</td>
<td>housewife</td>
<td>home</td>
<td>higher education</td>
</tr>
<tr>
<td>10</td>
<td>52</td>
<td>M</td>
<td>24</td>
<td>M</td>
<td>30</td>
<td>center</td>
<td>high school</td>
</tr>
<tr>
<td>11</td>
<td>34</td>
<td>F</td>
<td>1</td>
<td>Sep</td>
<td>housewife</td>
<td>center</td>
<td>elementary</td>
</tr>
</tbody>
</table>

Mean 47 27

Standard Deviation 14 11.74

<sup>a</sup>Marital Status: married (M), widow (W), single (S), separated (Sep).
one was unemployed. Four were housewives functioning independently in the home. Eight patients were married, one single, one separated, one was widowed. Information concerning years of education was obtained according to elementary, high school, and higher education. Four of the patients had some elementary education, five completed high school, and two were registered nurses, having completed two and a half to three years of education beyond high school. Location of the treatment of hemodialysis was in the home or a center which was a hospital unit or limited care facility for hemodialysis. Eight patients were on home dialysis treatment and three were receiving treatment at the center.

Results of Item Analysis for Discriminatory Power

The eleven completed Level of Wellness Scale questionnaires were divided into two groups, one representing the twenty-five percent high scorers and one representing the twenty-five percent low scorers. The difference in the correct responses of problem-solving which expresses level of wellness for each item was determined by subtracting correct low scorer response from high scorer response. This number was divided by three which was the number of subjects in each group to determine the discriminatory power for each item (DeCecco, 1968). All but one of the items proved to have a positive discriminatory power, and they divided problem-solvers from nonproblem-solvers. It is possible that with a
larger sample than the one used in this study, more items would not be discriminating. The data that resulted from this analysis are given in Table 2.

Table 2. Discriminatory Power of Items on Level of Wellness Scale in Relation to Problem-Solving Responses

<table>
<thead>
<tr>
<th>Item</th>
<th>Lower 25%</th>
<th>Upper 25%</th>
<th>Discriminatory Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0.66</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>3</td>
<td>0.00</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>3</td>
<td>1.00</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>2</td>
<td>0.66</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>2</td>
<td>0.66</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>2</td>
<td>0.66</td>
</tr>
<tr>
<td>7</td>
<td>0</td>
<td>1</td>
<td>0.33</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>2</td>
<td>0.66</td>
</tr>
<tr>
<td>9</td>
<td>0</td>
<td>1</td>
<td>0.33</td>
</tr>
</tbody>
</table>
Findings Relating to the Hypothesis

The hypothesis stated that the chronic renal hemodialysis patient who scores high on the researcher-designed questionnaire to measure problem-solving is regarded as having a higher level of wellness and will have significantly lesser anxiety as measured by the IPAT Anxiety Scale. The data from the Level of Wellness Scale are given in Table 3. A mean of 20.6 and a standard deviation of 3.02 were obtained for the data.

The data from the IPAT Anxiety Scale are also summarized in Table 3. The mean for total anxiety scores was 33.63 with a standard deviation of 6.78. Mean scores for the covert and overt anxiety subscores from the IPAT Anxiety Scale were computed. A mean score of 17.45 and a standard deviation of 3.42 were computed for the subscore of covert anxiety. A mean score of 16.18 and a standard deviation of 4.17 were obtained for the subscore of overt anxiety. These data are expressed in Table 3.

The Pearson product-moment correlation formula was used to compute correlation of the Level of Wellness Scale mean score with the covert, overt, and total mean score of the IPAT Anxiety Scale. A negative correlation coefficient of -.62 with nine degrees of freedom indicated an inverse relationship at a .05 level of significance for the Level of Wellness mean score and covert mean score. A negative correlation of -.38 for the Level of Wellness mean score with
### Table 3. IPAT Anxiety Scale and Level of Wellness Raw Scores

<table>
<thead>
<tr>
<th>Subject</th>
<th>Covert Score</th>
<th>Overt Score</th>
<th>Total Score</th>
<th>Level of Wellness Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13</td>
<td>14</td>
<td>27</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>23</td>
<td>26</td>
<td>49</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>19</td>
<td>39</td>
<td>20</td>
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<tr>
<td>4</td>
<td>19</td>
<td>10</td>
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<td>17</td>
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<td>5</td>
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<td>6</td>
<td>17</td>
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<td>7</td>
<td>15</td>
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<td>10</td>
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<td>34</td>
<td>23</td>
</tr>
<tr>
<td>11</td>
<td>23</td>
<td>19</td>
<td>42</td>
<td>19</td>
</tr>
<tr>
<td>Mean</td>
<td>17.45</td>
<td>16.18</td>
<td>33.63</td>
<td>20.6</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>3.42</td>
<td>4.17</td>
<td>6.78</td>
<td>3.0</td>
</tr>
</tbody>
</table>
the overt mean score was not significant. The total mean score from the IPAT Anxiety Scale correlated negatively with the Level of Wellness mean score with a -0.55 relationship. This correlation was not significant at the accepted .05 level of significance (Phillips and Thompson, 1967). Data for the correlations are found in Table 4.

Table 4. IPAT Anxiety Scale and Level of Wellness Scale Correlation

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean Score</th>
<th>Correlation</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Wellness</td>
<td>20.63</td>
<td>-0.62</td>
<td>&gt; .05</td>
</tr>
<tr>
<td>Covert Anxiety</td>
<td>17.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of Wellness</td>
<td>20.63</td>
<td>-0.38</td>
<td></td>
</tr>
<tr>
<td>Overt Anxiety</td>
<td>16.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of Wellness</td>
<td>20.63</td>
<td>-0.55</td>
<td>&gt; .10</td>
</tr>
<tr>
<td>Total Anxiety</td>
<td>33.63</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Degrees of freedom (N-2) = 9.

Comparison Between Anxiety and Possible Intervening Factors

In this section, the three variables of age, sex, and length of time of treatment for renal failure are compared with the total anxiety scores. This analysis is conducted in order to consider if one or more of the variables could be a factor associated with the higher anxiety scores. Since the sample was small, no statistical analysis of these variables
was obtained, but comparisons of the variables with the IPAT Anxiety Scale total score are expressed in scattergrams shown in Figures 1, 2, and 3. No comparison was demonstrated in age and IPAT Anxiety scores. Nine of the eleven subjects' scores cluster in the score range of 25-39 with an age range of 22-64 years. Figure 2 shows an increase in anxiety with three females, but four are in the same range of the total scores 25-34 as the males. Women have been noted to score higher in the IPAT Anxiety Scale than do men (Cattell and Scheier 1963). Length of treatment compared with the IPAT Anxiety Scale inferred general decrease in anxiety as months of treatment increased.

**Comparison of Sample with National Averages**

Table 5 shows the conversion of raw IPAT total scores for each subject into the sten system and percentiles. Standardized norm tables for the IPAT Anxiety Scale were used as a basis for this conversion (Cattell and Scheier 1963).

A sten of 7 was computed on the IPAT Anxiety Scale mean score. A sten of 7 is considered to be within normal range, indicating an average degree of anxiety. Sten scores of 4, 5, and 6 also relate to a normal range of anxiety, whereas a score of 1, 2, or 3 indicates an unusually secure, tough, placid, or relaxed person. A score of 8 indicates a person whose "anxiety level could be getting serious"
Figure 1. Scattergram for IPAT total scores compared with age of the subjects.
Figure 2. Scattergram for IPAT scores compared with sex of subject.
Figure 3. Scattergram for IPAT anxiety total scores compared with length of hemodialysis treatment in months.
Table 5. Conversion of Total Anxiety Scores to Stens and Percentiles

<table>
<thead>
<tr>
<th>Subject</th>
<th>Raw Score</th>
<th>Sten&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Percentile&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>27</td>
<td>5</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>49</td>
<td>9</td>
<td>96</td>
</tr>
<tr>
<td>3</td>
<td>39</td>
<td>7</td>
<td>77</td>
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<tr>
<td>4</td>
<td>29</td>
<td>6</td>
<td>60</td>
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<td>5</td>
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<tr>
<td>6</td>
<td>33</td>
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<td>60</td>
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<tr>
<td>7</td>
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<td>60</td>
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<tr>
<td>8</td>
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<td>5</td>
<td>40</td>
</tr>
<tr>
<td>9</td>
<td>32</td>
<td>6</td>
<td>60</td>
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<tr>
<td>10</td>
<td>34</td>
<td>7</td>
<td>77</td>
</tr>
<tr>
<td>11</td>
<td>42</td>
<td>8</td>
<td>89</td>
</tr>
<tr>
<td>Mean</td>
<td>33.63</td>
<td>7</td>
<td>77</td>
</tr>
</tbody>
</table>

<sup>a</sup>From Cattell and Scheier (1963).
(Cattell and Scheier 1963, p. 10). According to these authors, a sten level of 9 or 10 reveals a person definitely needing help, either to relieve a threatening situation or to ameliorate a characterological disposition (Cattell and Scheier 1963). Two patients in the sample had sten scores above 7. One subject scored 8, and another scored 9.

Summary

An item analysis for discriminatory power of the questions in the Level of Wellness Questionnaire indicated no discriminatory power for the second item. Demonstration of a positive discriminatory power for eight items led to acceptance of content validity for those items on the Level of Wellness Questionnaire.

Biographical data included age, sex, length of treatment for renal failure, marital status, employment, location of treatment, and education of each subject. The average age was 47 years and the average length of time of treatment was 27 months.

The Pearson product-moment correlation formula was used to compute correlation of the Level of Wellness Scale mean score with the IPAT Anxiety Scale total mean score. A negative correlation coefficient of -.55, an inverse relationship of the two scores, did not support the study's stated hypothesis.
A scattergram was used to compare length of time of treatment with the IPAT Anxiety Scale total score and inferred a general decrease in anxiety as length of time of treatment increased. Sex and age were also compared with the IPAT Anxiety Scale total score in scattergrams. No inferred comparisons were demonstrated.

When IPAT total raw scores for the subjects were converted to the sten system as used by Cattell and Sheier, a mean sten of 7 was computed for the sample. A sten of 7 is considered to be in the upper limit of normal range for anxiety.
CHAPTER V

DISCUSSION OF FINDINGS

The following chapter applies the theoretical framework described in Chapter I to the findings of the study, provides application to professional nurses' functions, and gives recommendations for further study.

Applications of Findings to Conceptual Framework

A theory of psychological stress provides nursing with a useful tool for evaluating anxiety-producing situations in the adjustment of an individual with a chronic health problem of renal failure. A basic need for security exists in man (Lazarus 1966). When existence is threatened by illness, anxiety may result in an effort to cope with the problem. With a chronic health problem, numbers of situations and ever-present problems may be anxiety-producing. The usual coping mechanisms from past experience may not serve to alleviate the anxious situation. In an effort to protect the self-concept in such situations, an individual may manage the anxiety by defenses such as denial, hostility, or anger.

Acceptance of an altered life-style with renal failure is more likely to be attainable if the individual
has stability through family support (Johnson et al. 1966). If difficulties are managed with a conscious, insightful plan of action which is carried out, and evaluated for further use, the individual has maximized his potential to progress to an increased level of wellness.

The findings of this research indicated that the total scores from the IPAT Anxiety Scale did not have a significant negative correlation with the level of wellness score. Statistical analysis of data was performed using a Pearson Product-Moment correlation. The acceptable level of significance was .05. In addition, a covert or "unrealized" subscore mean had a significant negative correlation with the Level of Wellness score at the .05 level; the overt or "symptomatic, conscious" subscore of -.38 did not have a significant negative correlation with the Level of Wellness score (Cattell and Scheier 1963, p. 10).

All subjects that were married as described in the biographical characteristics in Table 1 received support from their spouse; the others obtained parental assistance with the exception of the widow who functioned entirely independently of family or friends in reference to the treatment of dialysis, finances, and home activities. Question number five in the Level of Wellness Questionnaire related to family relationships; seven responses were accepting, and four were problem-solving. During the interview, 75 percent of the subjects expressed that their ability
to adjust to the chronic health problem related directly to family support.

Other characteristics of the sample included age, sex, employment, treatment location, and length of time of treatment. The mean age of the sample was 47 years. Seven females and four males were interviewed. Six of the eleven respondents were employed; two subjects worked forty hours a week, three subjects worked thirty hours per week, and one worked twenty hours a week. Four of the five that were commercially unemployed were housewives. Eight of the subjects received dialysis treatment in the home and three received their treatment in a center. One center was located in a general hospital and the other in a limited care facility for hemodialysis. The mean length of time for treatment by dialysis was 27 months. An inferred relationship between length of time of treatment and anxiety was demonstrated with a scattergram. As length of time for treatment of renal failure increased, the amount of anxiety decreased for individuals in the present study.

The researcher-designed questionnaire has value for use as a tool in nursing assessment of a patient with chronic renal disease. The significant negative correlation of the questionnaire with covert anxiety indicates the value in its application in assessing such anxiety. To identify covert anxiety is difficult, but with the use of the Level of Wellness instrument such information is directed into a
more definitive perspective, and thus can lead to appropriate intervention by the nurse.

**Application of Findings to Professional Nurse Functions**

As technological advances increase and cost of dialysis decreases, treatment for the chronic health problem of renal failure will be available to more individuals. Preparation of the individual is necessary if a goal of rehabilitation is to assist the individual to an independent, manageable life pattern. Understanding of psychological stress, identifying it, planning how to manage it, are functions of assessment and intervention that the professional nurse is concerned with in the chronic treatment of the renal failure patient. From these functions, the professional nurse should support and teach the patient to recognize and manage anxiety-producing situations and continuous problems that parallel the pathology of renal failure and its treatment.

**Recommendations for Further Study**

The problem of this investigation needs to be explored further with a larger and more varied sample. An attempt should be made to refine the Level of Wellness questionnaire to increase the validity of the categorization of responses in relation to acceptance and problem-solving.
An investigation for comparison of center-treated patients and home patients would be helpful. A comparison of level of wellness with different lengths of time of treatment should be made. Finally, an experimental study, designed to test the effect of nursing intervention with teaching and support of patients in managing anxiety should be conducted.

In conclusion, recommendations for future nursing research include the following areas.

1. Improvement of the Level of Wellness Questionnaire to increase the distinction between accepting and problem-solving responses, and increase the number of questions to include more situations concerning adjustment with a chronic health problem.

2. Further investigation utilizing the method of this study using a larger and more varied sample.

3. Comparative study of center and home patients using the method and tools of this investigation.

4. Comparative study of varied lengths of time of treatment with the type of methodology used in this study.

5. Experimental study that explores the effect of nursing intervention with teaching and support of patients in managing anxiety-producing situations should be conducted.
CHAPTER VI

SUMMARY

The study described in the preceding chapters was an attempt to apply a psychological theory of stress to interpret a level of wellness as expressed through problem-solving for an individual with a chronic health problem of renal failure.

Striving behavior for adaptation to an altered life pattern is blocked by anxiety (Lazarus 1966). Acceptance of the reality of the health problem is a necessary disposition to adjustment. If the individual can be assisted through teaching and supportive direction to manage problems in an insightful manner, that is a problem-solving method, he may be regarded as maximizing his potential and progress in his adjustment with a disease, its treatment, and concomitant problems of dependency, possible role change in family and in society, and alterations in self-concept, to an increased level of wellness.

Purpose of the Study

The purpose of this study was to further knowledge concerning the nurse's role in helping a patient's adjustment with a chronic health problem that necessitates
considerable time in treatment each week and often requires a change in life style.

Chronic hemodialysis treatment for renal failure was first introduced in 1960. Since that time the need has increased each year in excess of available facilities, trained personnel, and financial support. Although criteria for acceptance into a hemodialysis program considers stability and ability of the individual to manage such treatment, adjustment is a dynamic process, and entirely new situations present themselves in the process.

Specifically, the study attempted to determine the adjustment of an individual with renal failure and its treatment in terms of the effect of anxiety on his level of wellness. The problem which was researched was: To what extent does a chronic renal hemodialysis patient's problem-solving responses as a judgment of level of wellness, relate to his anxiety?

This problem is significant because: (1) of the ever increasing number of patients who will receive this type of treatment, (2) the answers to the problem will affect the preparation of these patients by the health team, and specifically the nurse, to care for themselves independently with hemodialysis in the home or a center.

Literature summarized in Chapter II indicated the psychological effects of hostility, anger, and denial that anxiety can bring about. Little description was given to
adaptive processes that were effective for individuals or how patients were prepared to manage anxiety.

**Methodology**

The design of the study involved the administration of two questionnaires. The instruments used were the Institute for Personality and Ability Testing (IPAT) Anxiety Questionnaire and the Level of Wellness Questionnaire which was developed by the researcher. The IPAT Anxiety Scale Questionnaire is designed as a 40 question scale that is divisible into a total anxiety score, an overt subscore, and five central anxiety components subscores. The Level of Wellness Questionnaire was composed of nine questions that measured problem-solving as an expression of a higher level of wellness.

The sample for the study included eleven subjects, four males and seven females with a mean age of 47 years. The mean length of time for treatment with hemodialysis was 27 months.

**Findings**

The hypothesis that was tested in the study was: the chronic renal hemodialysis patient who scores high on the Level of Wellness Questionnaire to measure problem-solving is regarded as having a higher level of wellness and will have significantly lesser anxiety as measured by the IPAT Anxiety Scale.
Statistical analysis with the Pearson Product-Moment obtained a negative correlation coefficient of -.55 when the total IPAT Anxiety mean score was compared with the Level of Wellness mean score. This analysis did not support the study's stated hypothesis. A covert subscore mean had an inverse relationship with the Level of Wellness Scale mean score with a negative correlation of -.62 at the .05 level of significance whereas the overt mean score negative correlation of -.38 with the level of wellness mean score was not significant.

When IPAT raw scores were converted to the sten system, a mean sten of seven was computed. A sten of seven, although borderline, is still within normal range of anxiety.

Conclusions

The findings of this research did not show that the level of wellness as expressed by problem-solving increased as the anxiety of the individual decreased. Although the covert subscore correlated significantly in a negative direction with the level of wellness score at the .05 level, the overt subscore did not. The tool has proved value from the results of the item analysis for discriminatory power, in addition to significant correlation with the IPAT covert anxiety score. This information provides a basis for further research concerning adjustment with a chronic health problem.
Recommendations for future related nursing research include:

1. Improvement of the Level of Wellness Questionnaire to increase the distinction between accepting and problem-solving responses, and increase the number of questions to include more situations concerning adjustment with a chronic health problem.

2. Further investigation utilizing the method of this study using a larger and more varied sample.

3. Comparative study of center and home patients using the method of this investigation.

4. Comparative study of varied lengths of time of treatment with the type of methodology used in this study.

5. Experimental study that explores the effect of nursing intervention with teaching and support of patients in managing anxiety-producing situations should be conducted.
Dear Doctor,

I am a graduate student in the College of Nursing at The University of Arizona, and am interested in conducting a research study concerning the adjustment of chronic hemodialysis patients. Although my experience is limited in this field, I feel that such an investigation could offer information to health workers, and specifically professional nurses with their responsibility of assisting these patients with their adjustment.

May I request permission to contact your patients that are being treated by hemodialysis? I will correspond with the patients initially by letter and follow with a telephone call a week later to inquire of their interest in participating and if they agree, a home interview appointment will be made. A consent form approved by the Human Rights Committee of The University of Arizona will be presented for signature by the subject.

There are two questionnaires to be used with the interview. A researcher-designed questionnaire measuring Level of Wellness as expressed through problem-solving is hypothesized to be higher when anxiety is significantly lower as measured by the IPAT Anxiety Scale. This is a psychological test developed by Cattell and Scheier.

Your interest and approval of my request will be appreciated.

Respectfully,

Mrs. Donna Shangreaux, R. N.
APPENDIX B

INITIAL CORRESPONDENCE WITH THE SUBJECT

February 19, 1973
Tucson, Arizona

Dear __________,

I am a registered nurse and am interested in kidney disease and its treatment. My home is in El Paso, Texas, but I am currently living in Tucson. I am enrolled in graduate study at the College of Nursing at The University of Arizona.

I wanted to inquire if you would participate in a study I am doing with kidney disease and its treatment. Hemodialysis is a fairly new field of treatment, and as with all health problems that must be treated over long periods of time, adjustment is an important concern. This is the emphasis of the study. There are two questionnaires to be completed; the nature of the questions deals with adjustment in life and family patterns.

It is my hope to include people in two locations, Tucson, Arizona, and El Paso, Texas in this research study. It is a voluntary participation and before contacting persons, I requested permission from the physicians to write to their patients. Participation is not time consuming; it will take approximately thirty minutes to complete the questionnaires. All information is anonymous.

I would like to contact you by telephone on Friday; at that time you can tell me if you are interested in participating. If you are interested, I would like to make an appointment with you for a later time.

Sincerely,

Mrs. Donna Shangreaux, R.N.
APPENDIX C

GENERAL INFORMATION FORM AND LEVEL OF WELLNESS QUESTIONNAIRE

General Information

1. Date of Birth____________________
2. Sex: Female_________ Male_______
3. Occupation___________________________
4. Employment
   Full-time________
   Part-time
   Less than half-time________
   Unemployed________
5. Year of school____________________
6. Marital Status____________________
7. Cost of dialysis per month__________
8. Financing of Treatment_______________
9. Length of time of treatment
   months__________________________
10. Treatment Location
    Home___________
    Center___________
Questionnaire

Select the Answer that Most Closely Describes Your Response with a Checkmark:

1. In responding to the limitations of my disease such as lessened physical activity, I tend to:
   ___ accept the limitations.
   ___ recognize the problems that come about from the limitations and work through the problems.
   ___ disregard the limitations.

2. If I have persistent discomforts from my disease, I generally:
   ___ ignore the discomforts.
   ___ accept the discomforts as just being part of my life.
   ___ attempt to deal with them in a way which lessens the attention given the discomforts.

3. When I plan for some type of activity, and because I don't feel well and can't keep my plans, I tend to:
   ___ get angry.
   ___ accept the situation.
   ___ anticipate when I felt better and plan accordingly.

4. When asked about my disease, I tend to:
   ___ talk about it.
   ___ avoid discussing it.
   ___ feel free to talk about problems that occur, that might help others to deal with the same problems.

5. What is your reaction to problems that occur with family members?
   ___ I try to find ways to resolve difficulties.
   ___ I recognize that difficulties occur in most family relationships.
   ___ I avoid the person.
6. If I feel depressed, I tend to:
   ___ avoid thinking about how I feel.
   ___ recognize how I feel.
   ___ discover ways of relieving the feeling.

7. Having to depend on others for help, I sometimes:
   ___ get angry.
   ___ recognize it without it upsetting me.
   ___ compensate for the dependency by planning and doing some activity that is of interest to me.

8. In responding to my medical treatment, I tend to:
   ___ follow orders.
   ___ disregard some orders.
   ___ find new ways to follow orders.

9. In comparing my present way of life to my life pattern before I got sick I:
   ___ avoid thinking about it.
   ___ recognize that there has been change.
   ___ recognize difficulties that have come about and handle them by myself or with the help of others.
APPENDIX D

IPAT ANXIETY QUESTIONNAIRE SCALE*

*From Cattell & Scheier (1963).
1. I find that my interests, in people and amusements, tend to change fairly rapidly

2. If people think poorly of me I can still go on quite serenely in my own mind

3. I like to wait till I am sure that what I am saying is correct, before I put forward an argument

4. I am inclined to let my actions get swayed by feelings of jealousy

5. If I had my life to live over again I would:
   (A) plan very differently, (B) want it the same

6. I admire my parents in all important matters

7. I find it hard to “take ‘no’ for an answer”, even when I know what I ask is impossible

8. I doubt the honesty of people who are more friendly than I would naturally expect them to be

9. In demanding and enforcing obedience my parents (or guardians) were: (A) always very reasonable, (B) often unreasonable

10. I need my friends more than they seem to need me

11. I feel sure that I could “pull myself together” to deal with an emergency

12. As a child I was afraid of the dark

13. People sometimes tell me that I show my excitement in voice and manner too obviously

14. If people take advantage of my friendliness I:
   (A) soon forget and forgive, (B) resent it and hold it against them

15. I find myself upset rather than helped by the kind of personal criticism that many people make

16. Often I get angry with people too quickly

17. I feel restless as if I want something but do not know what

18. I sometimes doubt whether people I am talking to are really interested in what I am saying

19. I have always been free from any vague feelings of ill-health, such as obscure pains, digestive upsets, awareness of heart action, etc

20. In discussion with some people, I get so annoyed that I can hardly trust myself to speak

CONTINUE ON NEXT PAGE.
21. Through getting tense I use up more energy than most people in getting things done.

22. I make a point of not being absent-minded or forgetful of details.

23. However difficult and unpleasant the obstacles, I always stick to my original intentions.

24. I tend to get over-excited and "rattled" in upsetting situations.

25. I occasionally have vivid dreams that disturb my sleep.

26. I always have enough energy when faced with difficulties.

27. I sometimes feel compelled to count things for no particular purpose.

28. Most people are a little queer mentally, though they do not like to admit it.

29. If I make an awkward social mistake I can soon forget it.

30. I feel grouchy and just do not want to see people:
   (A) occasionally, (B) rather often.

31. I am brought almost to tears by having things go wrong.

32. In the midst of social groups I am nevertheless sometimes overcome by feelings of loneliness and worthlessness.

33. I wake in the night and, through worry, have some difficulty in sleeping again.

34. My spirits generally stay high no matter how many troubles I meet.

35. I sometimes get feelings of guilt or remorse over quite small matters.

36. My nerves get on edge so that certain sounds, e.g., a screechy hinge, are unbearable and give me the shivers.

37. If something badly upsets me I generally calm down again quite quickly.

38. I tend to tremble or perspire when I think of a difficult task ahead.

39. I usually fall asleep quickly, in a few minutes, when I go to bed.

40. I sometimes get in a state of tension or turmoil as I think over my recent concerns and interests.

STOP HERE.  BE SURE YOU HAVE ANSWERED EVERY QUESTION.
APPENDIX E

SUBJECT CONSENT FORM

Information and Consent Form for Participation in
an Investigation of Adjustment to Chronic
Kidney Disease and Its Treatment

An investigative study is being conducted by Donna Shangreaux, a Master of Science student in Nursing, involving people with chronic kidney disease.

All that will be required for your participation will be a short period of your time and your response on two questionnaire forms. The nature of the questions concerns a person's adjustment to a health problem of chronic kidney disease, its treatment, and the effect it has in a family life pattern. All information which is obtained will bear no name. The record of your feelings could contribute some important information to health workers interested in finding out how they can be more helpful to people with chronic kidney disease.

Your doctor has already given permission for me to contact you. If you choose not to participate in the study, this will in no way affect the treatment and care you receive nor the relationship you have with your physician.

If you are willing to participate, please sign your name in the space provided below.

I consent to participate in the study described above. I understand that my participation is voluntary and that I may withdraw from the study at any time I so choose.

Signature__________________________
Date______________________________

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REFERENCES


