# THE RELATIONSHIPS AMONG SOCIAL SUPPORT, COPING METHODS, AND QUALITY OF LIFE IN ADULT BAHRAINI CLIENTS ON MAINTENANCE HEMODIALYSIS

by

**Mouza Abdulla Suwaileh, B.S.N., M.S.N.**

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**Approved by**

**Dissertation Committee:**

Alexa K. Stuifbergen

Muriel P. Shaul

Doris M. Howard

Helen S. Erickson

Geraldine M. Gorsen

Ronald J. Angel

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S939
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**To my Parents**

**for**

**their everlasting love, support, and encouragement**

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The purpose of this study was to explore the relationships between social support and coping methods and their contribution to the prediction of quality of life in adult Bahraini clients on maintenance hemodialysis. Selected concepts from Lazarus' stress and coping theory (1984) were used as a conceptual framework for this study.

Data were collected from 60 adult Bahraini clients on hemodialysis. Subjects were interviewed using: (a) a single-item social support measure, (b) Personal Resource Questionnaire 85 Part II, (c) Modified version of Part A of Jalowiec Coping Scale, (d) Cantril's ladder, and (e) demographic data questionnaire.

Availability of social support resources was associated with greater use of supportant coping, and less frequent use of self-reliant coping methods. Satisfaction with social support resources was associated with the use of

supportant coping, and less frequent use of fatalistic coping methods. Perceived social support was significantly related to the use of confrontive coping methods. Perceived social support was positively associated with the use of palliative, supportant, and optimistic coping, and negatively associated with the use of evasive, fatalistic, and emotive coping methods.

Social support variables, problem-oriented coping, and emotion-oriented coping predicted 27% of the variance in present quality of life among adult Bahraini clients on maintenance hemodialysis. Perceived social support, emotive coping methods, and marital status predicted 36% of the variance in quality of life.

Subjects' ratings of present quality of life were significantly lower than their retrospective ratings. Qualitative data revealed five critical domains of quality of life including: physical health, psychological health, family concerns, social concerns, and financial concerns domains.

Qualitative data suggested the need to modify the JCS and consider the cultural issues when examining the concept of coping. Future research should be directed to identify other significant predictors of quality of life. Findings of such studies may assist health care providers in planning and implementing strategies that improve the quality of life of chronically-ill clients.

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# CHAPTER I

## INTRODUCTION

End stage renal failure (ESRD) is a life-threatening chronic illness. It is defined as " irreversible renal failure that necessitates dialysis or transplantation for survival" (Ulrich, 1989, p. 62). It is present when creatinine clearance is less than 25% of normal levels and the client's abnormal renal function begins to significantly affect every aspect of his/her health (Al-Arrayed, 1988).

End stage renal failure, with its various treatment modalities, constitutes a unique type of chronic illness (Sensky, 1993). During its course, clients experience multiple demands which require their, and their families, continuous efforts. Failure to meet such needs results in additional stressors which may cause disruption of the family system.

Clients on hemodialysis undergo numerous physical changes, such as chronic fatigue, limitations on physical activities and social interactions, decreased opportunities for employment, and reduced levels of independence. Apart from the physical dysfunction of all organ systems, clients with ESRD experience social and psychological problems that affect their well-being and alter their lifestyles. These changes include, but are not limited to, anxiety, depression, loss of control, and social isolation .

Coping with and adapting to a chronic illness varies widely and is related to the nature of the disease and its physiological characteristics and to the psychological, social, and cultural environment of the individual involved (Dimond, 1979). Socially supportive environments may facilitate clients' engagement in a variety of coping behaviors that will enhance their abilities to adapt to hemodialysis-related stressors and to the general stressors of living with a chronic illness. Greenburg, Weltz, Spitz, and Bizzozero (1975) suggest three factors that may contribute to positive adaptation: (a) the use of defensive mechanisms, especially denial, displacement, isolation, projection, and reaction-formation; (b) the client's ability to cope with being dependent on dialysis; and (c) the presence of a functionally supportive family system.

The impact of social support on health and health behaviors has been studied by a number of researchers. The importance of interaction within the client's network and his ability to mobilize supportive resources from his network can maintain health, enhance physical recovery ( Caplan, 1974; Bloom, 1990), and improve the quality of life (De-Nour, 1982; Ferrans & Powers, 1993).

Nurses are encouraged to appreciate the power of social support in influencing clients' health and clients' engagement in health behaviors. The role of nurses and other health care providers is to understand the client's

perception of the effects of ESRD on his life and to assist him in adapting to multiple changes in lifestyle. Therefore, it is essential that nurses be aware of the factors that contribute to the adaptation process, including the use of specific coping behaviors and the provision of a supportive environment.

## Purpose

The purpose of this study was to examine the relationships among perceived and received social support on the use of coping methods and quality of life in adult Bahraini clients on maintenance hemodialysis. The study specifically investigated: (a) the types of methods Bahraini adult clients on hemodialysis use to cope with the hemodialysis-related stressors; (b) the types of social support necessary for coping and adaptation of hemodialysis clients; and (c) the relationship between perceived and received social support and the use of coping methods, and their contribution to the client's quality of life.

## Background and Significance of the Study

Hemodialysis is generally defined as the removal of chemical substances from the blood by passing it through tubes made of semipermeable membranes. The tubes are continually bathed by solutions which selectively remove unwanted materials. The principles involved in the movement of fluid

or solute are diffusion, osmosis, filtration, and ultrafiltration. It is a relatively new procedure, used successfully as a medical treatment since 1960. In order to perform dialysis, vascular access must be made available to handle the removal and return of blood. Vascular options include a femoral/subclavian catheter, an external shunt, an internal arterio-venous fistula, or an internal graft arterio-venous fistula (Ulrich, 1989).

The hemodialysis procedure takes three to five hours, and is performed two to three times a week. Friedman, Goodwin and Chaudhry (1970) reported that maintenance hemodialysis performed at a center, or involvement in activities necessitated by hemodialysis therapy consumes 31% of a client's week (based on five days). This results in a shortened work week and reduced annual income of full-time employed patients. Such clients find it difficult to maintain both interest and efficiency in their work. Interference with their work patterns increases as the number of hours of hemodialysis per week increases. Concerns about their down-graded living standard, along with the physical and psychological problems associated with dialysis, restrict the clients' social, vocational, and leisure time activities.

There is general agreement in the literature with regard to hemodialysis-related stressors and their effects on client's and family life. Although residents of Bahrain receive free health care services, including

hemodialysis treatment, they, and their families, experience considerable periods of distress that require their combined efforts to adapt to the physical and life changes, including role reversal within the family. It is useful to examine the demographics of Bahrain, the incidence of ESRD and its treatment there, and the role of the Arab family and society as a support system, before launching a discussion of how Bahraini clients and families deal with the stressors of hemodialysis.

The Arabic meaning of Bahrain is "two seas", referring to the presence of fresh water springs beneath the surrounding Arabian Gulf. The State of Bahrain consists of a group of 33 islands with a total area of 693.15 square kilometers. It lies roughly halfway in the middle of the Arabian Gulf, also known as Persian Gulf, and is linked to the eastern part of the Saudi Arabia by a causeway, approximately 24 kilometers in length.

The 1992 population of Bahrain was 508,037. Thirty two percent of the population is below the age of fifteen years and less than 3% of the population is 60 years and older, indicating a very young population. The crude birth rate is 30.5/1000 (the U. S rate is 16.9/1000). The crude death rate is 3.4/1000 (the U. S rate is 8.6/1000). The low crude death rate is attributed mainly to the under-reporting of deaths and the large youth population. The literacy rate is more than 82.6% (Directorate of Statistics, 1993).

The average size household is six to ten persons, and most families are of the nuclear type (Al-Thakeb, 1981). The government provides free comprehensive primary, secondary, and tertiary health care to all residents of Bahrain through a network of health centers and hospitals (Ministry of Health, 1992).

The estimated incidence of ESRD worldwide is 80 people per million of population each year (Al-arrayed, 1988). In Europe, the incidence ranges between 50-80 per million each year. In the United States, it is estimated that more than 100,000 people receive some kind of ESRD treatment modalities (Sensky, 1993). In the Arab world of 180 million, 14,400 clients per year will require some kind of treatment for ESRD. In the Gulf Cooperation Council (GCC) countries, with a total populations of 11 million, the estimated incidence of ESRD is about 880 clients per year.

The major causes of ESRD in Bahrain and other GCC countries are: glumerulonephritis 52%, pyelonephritis 24%, polycystic kidney disease 7.2%, renal stone 3.5%, diabetic nephropathy 2.2%, and uncertain causes 6.2% (Al-Arrayed, 1988). According to the census conducted in 1992 by the Bahraini Ministry of Health, the estimated incidence of diseases of the urinary system was 258 cases per year (Ministry of Health , 1992).

There is a progressive increase in the number of clients treated by hemodialysis at Salmaniya Medical Center (SMC) (the largest government hospital in Bahrain). The number of clients on hemodialysis at SMC increased from three clients in 1978 to 60 clients in 1995 (Kidney Care Unit, 1995). This increase is chiefly due to the physicians' and clients' greater awareness of the availability of such treatment (Al Arrayed, 1988). Since Bahraini adult clients with ESRD receive free health care services, including hemodialysis, the decision to provide this treatment is based on an assessment of how maintenance hemodialysis will impact the client's quality of life.

The general understanding among the public is that hemodialysis will effectively correct the metabolic abnormalities related to ESRD. However, these abnormalities may persist, and other systemic complications may appear during treatment. Cardiovascular disorders and infection are the two primary comorbid medical conditions that result in mortality for Bahraini clients with ESRD (Al-arrayed, 1988). The mortality rate due to complications of dialysis is estimated to be 20%, while it is only 1-2% among living donor kidney transplants (Gulf Daily News, 1995).

In Bahrain, kidney transplantation has been started recently and is limited to live related donors. There is no provision for organ donation or a cadaveric kidney bank. Therefore, clients with ESRD are expected to be more

dependent on hemodialysis. Prolonged dependency on hemodialysis increases the risk that these clients will experience greater stress, which may decrease their physical and psychological well-being and lead to maladaptation.

The findings of a number of studies indicate that maintenance hemodialysis is an extremely stressful treatment that affects every aspect of a client's life ( Baldree, Murphy, & Powers, 1982; Gurklis & Menke, 1988; Levy, 1979; Wright, Sand, & Livingston, 1966). According to a prior study conducted by the investigator of this study and based on her personal experience, the associated psychosocial problems are not perceived by Bahraini hemodialysis clients to be as great a source of stressors as are the physical problems.

In an earlier study of 26 Bahraini hemodialysis clients, using the Hemodialysis Stressors Scale (Baldree, Murphy & Powers, 1982), subjects responded that they were troubled "a great deal" by the following stressors: sleep disturbances (54%); loss of body function (42%); nausea and vomiting (39%); changes in family responsibilities (39%); itching (39%); uncertainty about future (39%); and muscle cramps/soreness (35%). Additional stressors reported were back pain, the procedure itself, feelings of worthlessness, inability to pass urine, inability to work, inability to walk long distances, difficulty in breathing, loss of vision, ringing in the ears, chest pain, and

impotence. Most of the additional stressors were reported by younger male subjects. Older male subjects reported that they felt much better since they began hemodialysis treatment and did not have many problems, except when they missed an appointment. Female subjects reported back pain and inability to walk long distances as their chief complaints (Suwaileh, 1990).

Social support, which emphasizes the importance of interaction between the individual and his environment, has been explored as a means for clients to regain health and adapt to the demands of chronic illness and the experience of hemodialysis. Nursing literature has focused on the role of nursing in modifying the environment to facilitate the emotional adjustment and well-being of clients. Ongoing interaction with significant others is very important for hemodialysis clients to deal with treatment-related stressors (O'Brien, 1980). Affection, affirmation, and reciprocity from partner and family are associated with decreased depression, greater marital satisfaction, and improved family life in women with chronic illness (Primomo, Yates, & Woods, 1990).

The traditional Arab family is considered the primary support system for individuals in times of crisis. The cooperation of all family members is an important feature of the Arab family. The meaning of the word family in Arabic, "aila" or "usra", implies mutual commitment, relationship, reciprocity,

and deep attachment (Barakat, 1993). Although the number of extended families in Arab culture has decreased drastically, close ties between relatives remain strong and highly interlocked relationships are common (Barakat, 1993). Therefore, the entire family and its structure and relationships are affected by the illness of a family member.

In a study of 526 male and female heads of households in Kuwait, Al-Thakeb (1985) found that half of the respondents indicated that they would turn to a relative for assistance in illness, financial need, child care, personal and business problems. However, several authors (Baer, 1964; Goode, 1963) argued that modernization, and education have reciprocal effects on the Arab family and other social institutions. Other western family sociologists argued that urbanization and modernization led to a breakdown of kinship ties and loyalty between family members and is replaced by economic and political loyalty as modernization becomes more evident in Arab countries (Al-Thakeb, 1985).

Al-Haj (1988) stated that a key issue in the analysis of the effects of modernization on the social and economical changes is to determine the impact of these changes on the family structure and centrality of kinship groups.

In the past two decades, urbanization and various influences of western education led to changes in family structure among middle and upper classes of

Arab countries. The traditional extended family households became less frequent and the nuclear family became the dominant structure (El Safty, 1981).

The religion of Islam, which emphasizes submission to God, is a major influence on Arab culture. Muslims believe that although what happens to them is God's will, they should not stand idle when crises occur. Adherence to spiritual and religious practices is highly recommended and practiced by Muslims during crises. The most predominant religious practice is recitation of Quran (the Holy Book) by the client and family members in order to enhance their ability to cope with the crisis.

Ali and Khalil (1991) reported that the most commonly used coping behaviors by Egyptian female mastectomy clients were faith in God, compliance with the medical regimen, seeking information, social support, and self-distraction. Although Islam emphasizes cooperation and sharing of sorrow and happiness (Mawdudi, 1991), the social interactions and supports that influence patients' coping and adaptation have not been explored among Bahraini clients on hemodialysis.

This study addressed the lack of information about social support and the use of coping methods and their effects on the health and quality of life of chronically ill Bahraini clients, particularly those with ESRD on maintenance

hemodialysis. By assessing the influence of the environment on successful functioning, life satisfaction, and quality of life, this study sought additional support for the findings of previous international research on social support as a function of hemodialysis adaptation. The findings of this study may guide professional caregivers in interventions with clients and their families, may be used to plan recreational and educational programs relevant to Bahraini clients on hemodialysis, and may stimulate other researchers to propose alternative models and strategies of social support.

## Conceptual Framework

The conceptual framework for this study was based on Lazarus and Folkman's (1984) cognitive theory of stress and coping. This theory postulates that the process of cognitive appraisal is a judgment or evaluation which involves recognition of (a) the degree of demands (stressors) and (b) the available resources that will help to manage the stressful situation.

In the primary appraisal stage, the person evaluates the situation as: (a) irrelevant, meaning that it has no implications for the individual's well-being or carries no value, need, or commitment; or (b) benign-positive, indicating that the outcome of the situation is seen as positive in terms of enhancing or promising to enhance the individual's well-being; or (c) stressful. If the situation is evaluated as stressful, it can be further analyzed as representing

either harm/loss, threat, or challenge. Harm/ loss refers to damage that has already happened, the effects of which are central and extensive and continuously produce stress. Threat refers to anticipated harm or losses that might occur in the future. Challenge refers to appraisals that focus on the potential for personal gain or growth (Lazarus & Folkman, 1984).

In the secondary appraisal stage, the person evaluates the available coping resources and options for managing the stressful situation. Secondary appraisal allows the person to identify coping options, assess the effectiveness of a specific coping option to overcome the stressful situation, and evaluate the consequences of using specific coping strategies in the context of other stressful situations.

The concepts of stress, coping, and adaptation must be viewed in the context of the individual's relationship to his environment (Lazarus and Folkman, 1984). Lazarus and Folkman defined psychological stress as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19).

Lazarus and Folkman (1984) defined coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person"

(p. 141). This definition has four distinctive features; it is process-oriented, it emphasizes management of the stressful event rather than mastering it, it makes no prior judgment about the quality of coping process, and it makes a distinction between coping and automatic adaptive behaviors.

According to Lazarus and Folkman (1984) coping serves two functions: (a) managing or changing the problem with the situation or environment causing stress (problem-oriented coping), and (b) regulating emotional responses to the problem (emotion-oriented coping). These functions of coping have also been recognized, implicitly and explicitly by George (1974), Murphy (1974), and Pearlin and Schooler (1978).

Lazarus and Folkman (1984) postulated that the ways in which a person copes are determined by his or her resources, including: commitments, problem-solving skills, social skills, social support, and material resources. Coping is also determined by personal and environmental constraints that hinder the use of these resources. The degree of threat presented by the stressors can also prevent a person from using coping resources effectively.

Lazarus and Folkman (1984) proposed that social support and the perceived availability of social support influence the individual's coping behaviors. Silver and Wortman (1980) proposed that providing informational support to persons under stress may assist them in appraising their stressful

situations differently and thereby, enhance the individuals' ability to directly deal with the stressful events.

It is believed that people will have effective adaptive outcomes if they receive or perceive that they will receive social support to facilitate the coping process. Social support is viewed as a process that changes according to the dynamic relationship between the person and his environment (Lazarus & Folkman, 1984). Thoits (1982) proposed that social support has direct positive effects on well-being. Cobb (1976) claimed that "adequate social support can protect people in crises from a wide variety of pathological states" (p. 310).

In the literature, the concepts of social support and social network are sometimes used interchangeably. A distinction between social support and social network is essential to avoid confusion about their differences, exact definitions, and applications (Tilden & Weinert, 1987). The conceptualization of social environment emphasizes the multiple structural, cultural, interpersonal, and psychological systems that incorporate adaptive and adjustive characteristics (Dean & Lin, 1977).

Current research on social support focuses on three explanations of its effects on health outcomes: (a) social support may prevent stress, (b) it may buffer stress, or (c) it may have a direct positive effect on health (Tilden & Weinert, 1987). According to Thoits (1982) and Cohen and Wills (1985)

social support has a main (direct) effect in which it directly enhances well-being by meeting the individual's basic social needs and enhancing social interaction.

The buffering (indirect) effect was supported by Caplan (1974), Cassel (1974), and Cobb (1976), who argued that social support protects individuals from the negative effects of stress and enhances their coping abilities. Other studies have provided inconsistent findings regarding the main and the buffering effects of social support.

Elmore's (1984) study on the effects of social support on depression, and Jordan and Meckler's (1982) study on the relationship between life changing events, social support, and dysmenorrhoea found confirmation of the buffering hypothesis, while Tilden (1983) and Baillie, Norbeck, and Barnes (1988) found support for only the main effect hypothesis.

Nurse researchers have focused frequently on the main and buffering effects hypotheses to study the relationships among various stressors, social support, and health (Artirian, 1993). Thoits (1986) reconceptualized social support as coping assistance in which the person's socially supportive environment may enhance his or her coping behaviors. She viewed coping within a social context where stressful life events involve, directly or indirectly, a group of people sharing the same event. Thoits (1986) claimed that coping

and social support have similar functions: instrumental, emotional, and perceptional.

Instrumental functions in social support refer to tangible assistance and material aid, while in coping it refers to problem-oriented coping. Emotional functions in social support refer to emotional support, while in coping it refers to emotion-oriented coping. Perceptional function in social support refers to provision of information to help an individual positively change her/ his perception of the stressful situation, while in coping it refers to cognitive restructuring. This view of social support demonstrates how support works and when or at what point in the stress coping process it will be perceived by the recipient as being effective.

Thoits' (1986) approach to social support resources stands in contrast to the traditional approach of investigating the stress-buffering effects of social support. Her more integrative approach included a model to test hypotheses and to investigate the type and timing of provision of social support in relation to its effectiveness in minimizing stress based on a more general theory of stress-buffering.

Presence of social support network such as: family, close friends, neighbors, and professionals may influence health outcomes either directly or indirectly. The direct influence may be through provision of information or

motivation for health behaviors. The indirect influence may be through encouragement to adhere to the treatment or maintain health promoting behaviors (Bloom, 1990; Cohen & Wills, 1985). Intimate relationships with spouses and friends predict great support satisfaction (Hobfoll, Nadler, & Leiberman, 1986).

Although both the theoretical and research literature and clinical practice emphasizes the importance of social support in individual's health, Smith, Frenengel, Halcroft, Gerald, and Marien (1994), in their meta-analysis of 60 published and seven unpublished studies, found only small association between social support and health outcomes. Stewart (1993) concluded that availability of social support resources and perceived social support are both important in the coping process.

Cohen and Wills (1985) reported that close and intimate relationships help to reduce psychological and physical morbidity risk. They proposed that stress-buffering mechanisms of social support operate at two different points in the relationship between stress and illness. First, social support may affect the relationship between the stressful event (stimuli) and the stress reaction. Provision of support at this point helps the individual to reappraise the situation and/or enhances the individual's ability to cope with the demands of the stressful situation. Therefore, the situation may be appraised as less stressful or

harmful. Secondly, social support may affect the relationship between the experience of stress and the outcome of the stress reaction. This mechanism works by minimizing or alleviating the reaction to stress or by enhancing the physiological processes, especially the immune system, to counterbalance the stress reaction.

Based on selected concepts from Lazarus and Folkman's cognitive theory of stress and coping (Lazarus & Folkman, 1984), the relationship among the study variables was examined. Figure 1 presents the proposed theoretical relationships among the variables examined in this study including; availability of social support resources/ presence of a confidant, perceived satisfaction with social support, perceived level of social support, the use of coping methods, and quality of life outcomes.

According to Lazarus and Folkman's' s cognitive theory of stress and coping, there are two main functions of coping; problem-oriented, and emotion-oriented coping. Therefore, the specific coping behaviors investigated in this study were the problem-oriented and the emotion-oriented coping behaviors. It was posited that as a result of the presence of hemodialysis-related stressors, clients pass through the process of primary appraisal, during which they assess the demands of the stressors and their possible impact on their lives.

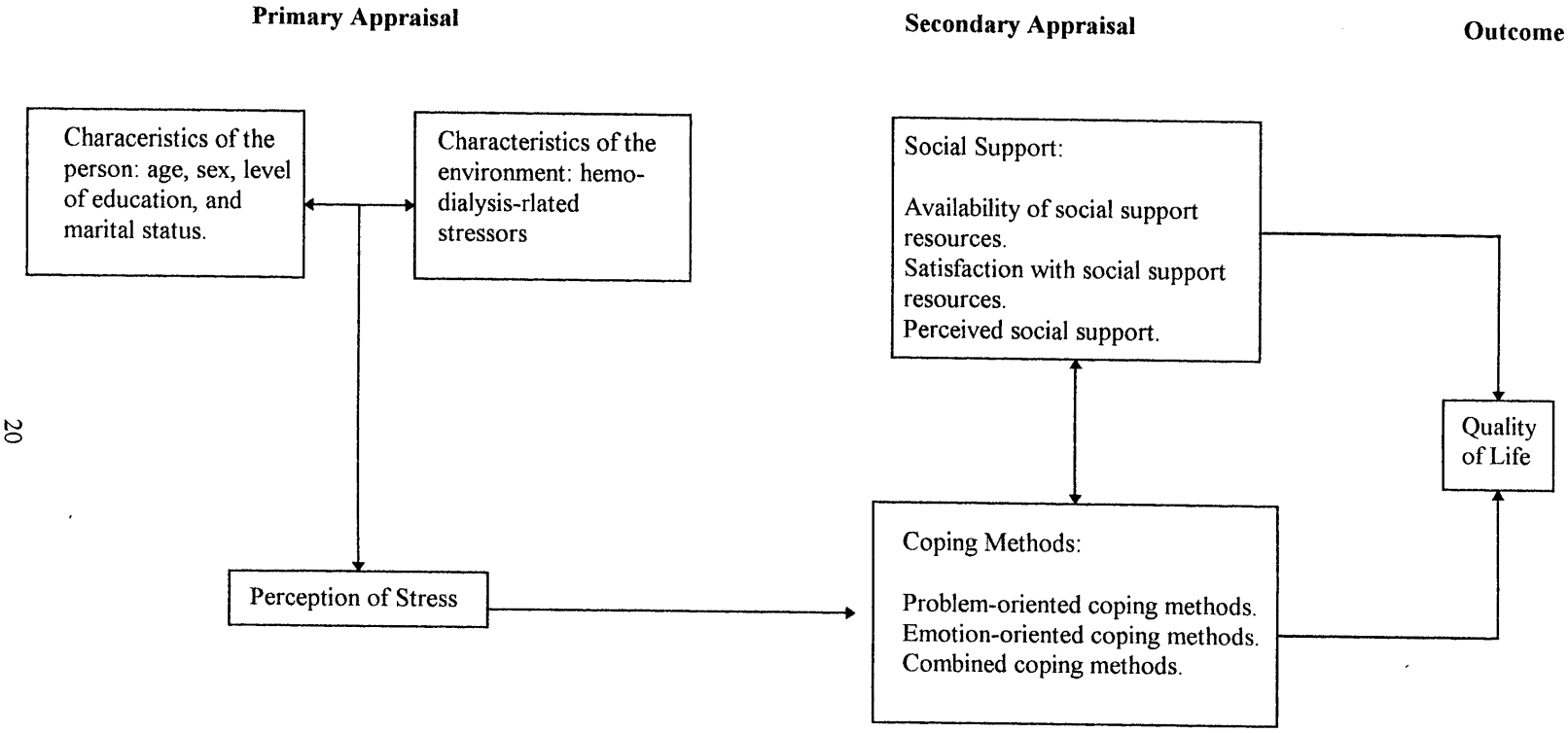



Figure 1. Social Support, Coping, and Quality of life Model

(Based on selected concepts from Lazarus and Folkman's stress and coping theory,1984)

During the secondary appraisal stage clients recognize the coping resources and options that are available to manage the effects of stress and adaptation . Adaptation to hemodialysis and improvement of clients' quality of life outcomes may be enhanced through the integrative effects of social support and coping. Availability of social support resources or the presence of a confidant, satisfaction with the social support received, and perceived level of social support, may have a direct impact on clients' quality of life outcomes and an indirect impact through the use of coping methods.

Social support from significant others promotes behaviors that enhance the physical and mental health of individuals. Engagement of clients in such behaviors regulates the clients' thoughts, feelings, and perceptions regarding the stressful situation, leading to a better appraisal of the situation. Social support is thought to influence positive outcomes by (a) regulating thought behaviors that promote health ( House, Landis & Umberson, 1988), (b) enhancing the individual's sense of meaningful life ( Antonovsky, 1979), and (c) facilitating health promoting behaviors (Umberson, 1987).

## Statement of Problem/Research Questions

Past research on social support and its relationships to health outcomes reflect the inconsistency in the theoretical and operational definitions as well as the measurements of the concept. The findings of these research studies (Dimond, 1979; Korniewicz & O'Brien, 1994; Rook, 1984; Siegel, Calsyn & Cuddihee, 1987; White, Katefian, Starr & Voelpel-Lewis, 1990) have contributed to the conceptualization and measurement of social support and its positive and negative effects on health outcomes of diverse population with chronic illness. However, no studies have been conducted to investigate the effects of social support on health outcomes among Bahraini clients with chronic illness receiving prolonged medical treatment. By understanding the effects of social support on health outcomes and its relationships to coping behaviors, nurses may assist clients and their families to adapt to the stressors of chronic illness and its prolonged medical treatment. Therefore, the problem identified for this study was: does the clients' perception of social support and engagement in coping behaviors contribute to the clients' perception of their quality of life?

The research questions for this study were:

1. What is the relationship between availability of social support resources/ presence of a confidant and the use of problem-oriented and emotion-oriented coping methods?

2. What is the relationship between the perceived satisfaction with social support and the use of problem-oriented and emotion-oriented coping methods?

3. What is the relationship between the perceived level of social support and the use of problem-oriented and emotion-oriented coping methods among adult Bahraini clients on maintenance hemodialysis?

4. Does the use of problem-oriented coping methods add significantly to the prediction of the quality of life among adult Bahraini clients on maintenance hemodialysis after the effects of social support variables (availability of social support resources, satisfaction with social support, and perceived level of social support) and the use of emotion focused coping have been accounted for?

5. Does the use of emotion-oriented coping methods add significantly to the prediction of quality of life among adult Bahraini clients on maintenance hemodialysis after the effect of social support variables ( availability of social support resources, satisfaction with social support, perceived level of social

support) and the use of problem oriented coping behaviors have been accounted for?

6. Does social support add significantly to the prediction of quality of life among adult Bahraini clients on maintenance hemodialysis after the effects of the use of coping methods have been accounted for?

7. What is the difference in the present quality of life ratings of adult Bahraini clients on hemodialysis and their retrospective ratings of quality of life prior to dialysis treatment?

8. What are the critical domains of quality of life outcomes identified by Bahraini adult clients on maintenance hemodialysis?

## Definitions

For the purpose of this study, the following definitions were used:

1. End Stage Renal Disease (ESRD) was defined as " an irreversible renal failure that necessitates dialysis or transplantation for survival" (Ulrich, 1989, p. 62).

2. Hemodialysis was defined as " the procedure used to cleanse the blood of patients with defective or absence kidneys to remove excess accumulation of drugs and toxic chemicals from the blood" (Ulrich, 1989).

3. Availability of social support resources/presence of a confidant was conceptually defined as the client's perception of having a network that provides or is available to provide situational support (Weinert, 1987). Availability of social support resources was operationally defined as the participant's self-report of the number of social support resources that provide or are available to provide situational support when needed. Availability of social support resources was measured by a single-item measure constructed by the investigator of this study and adapted from PRQ 85 Part I (Weinert, 1987), in which respondents indicate to whom they could turn to when they encounter a serious problem with which they need help.

4. Satisfaction with social support was conceptually defined as the clients' self-report of the level of satisfaction felt with the assistance received (Weinert, 1987). Satisfaction with social support was operationally defined as self-report score on the satisfaction portion of the single-item measure adapted from PRQ 85 Part I (Weinert, 1987).

5. Perceived social support was conceptually defined as the client's perception of being provided with specific supportive behaviors when needed, including: (a) attachment/intimacy; (b) social integration; (c) opportunity for nurturance; (d) the indication that one is valued; and (e) the availability of informational, emotional, and material help (Weiss, 1974). Perceived social

support was operationally defined as the total score on the Personal Resource Questionnaire 85 (PRQ 85) Part II (Weinert, 1987).

6. Coping methods was conceptually defined as cognitive efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person (Lazarus & Folkman, 1984). Coping methods was operationally defined as the total score of use of coping methods on the Modified version of Part A of the Jalowiec Coping Scale (JCS) (Jalowiec, 1991).

7. Problem-oriented coping methods was conceptually defined as the methods used by individuals to manage or change the situation or environment causing stress (Lazarus & Folkman, 1984). Problem-oriented coping methods was operationally defined as the total score of the use of the 22 items of the problem-oriented subscale of the modified version of Part A of the Jalowiec Coping Scale.

8. Emotion-oriented coping methods was conceptually defined as the methods used by individuals that are directed toward regulating their emotional responses to the problem (Lazarus & Folkman, 1984). Emotion-oriented coping was operationally defined as the total score of the use of the 32 items of the emotion-oriented coping subscale of Part A of the modified version of the Jalowiec coping Scale.

9. Quality of life was conceptually defined as the individual's sense of well-being that originates from satisfaction or dissatisfaction with specific areas of life that constitute important domains of his or her life (Ferrans, 1990; Ferrans & Powers, 1993). Quality of life was operationally defined as the client's self-report score on the Cantril ladder (Cantril, 1965).

## Assumptions

For the purpose of this study, the following assumptions were made:

1. ESRD clients on hemodialysis experience stressors that require the mobilization of their external support resources.

2. Quality of life reflects the clients' assumptions, perceptions, aspirations, and values based on specific circumstances of their life experiences.

3. The effective use of specific coping behaviors reflects the client's short-term and/or long-term ability to adapt to chronic illness and hemodialysis-related stressors.

4. Clients are willing and able to disclose and discuss their perceptions regarding social support, coping, and quality of life outcomes.

5. The construct/concept of social support, coping, and quality of life outcomes are valid cross-culturally.

## Limitations

The following limitations were addressed in this study:

1. This study used a convenience sample. Therefore, generalization of the findings will be limited to similar groups of clients.

2. The cross-sectional design used in this study reflects the clients' perceptions at one point in time with regard to the study variables. This does not reflect their perceptions at another time.

3. The self-report measures of the study variables are limited to what the subjects were willing to share.

4. The descriptive correlational design used in this study was limited to description of the relationships among the study variables without further inferences of cause and effect relationships.

5. The reliability of the data obtained from the retrospective ratings of subjects' quality of life is questionable because of the time factor in recalling such information.

## Summary

In this chapter, the purpose, significance, theoretical framework, research questions, definitions, assumptions, and limitations of the study were presented. The purpose of the study was to investigate the effect of social support on coping behaviors and quality of life of Bahraini adult clients on maintenance

hemodialysis. The findings of this study will help nurses to assess the environmental factors related to social support that contribute to successful functioning and consequent improvement in clients' quality of life. The theoretical framework used to guide this study and the research questions was based on Lazarus & Folkman's (1984) conceptualization of stress, coping, and adaptation. The research questions were based on conceptualization of selected concepts presented in the model.

# CHAPTER II

# REVIEW OF THE LITERATURE

The review of the literature includes five sections addressing the major variables investigated in this study. The first section focuses on the perception of hemodialysis-related stressors. The second section presents the conceptualization of social support, and the third, the conceptualization of coping. In the fourth section, the impact of social support on the use of coping behaviors among hemodialysis clients is discussed. Section five examines the influence of social support on the client's quality of life and health.

## Perception of Hemodialysis-Related Stressors

Identification of hemodialysis-related stressors among clients on maintenance hemodialysis has been studied by many researchers (Anger, 1975; Baldree, Murphy, & Powers, 1982; Bihl, Ferrans, & Powers, 1988; Czackes & De-Nour, 1978; De-Nour, 1982; Eichel, 1986; Freidrich, 1980; Fuches & Schreiber, 1988; Gurklis & Menke, 1988; Reichsman & Levy, 1972; and Wright, Sands, & Livingston, 1966). The incidence and severity of hemodialysis-related stressors was not found to be related to the client's age, gender, marital status, level of education, length of treatment, or number of months on dialysis (Baldree, et al. 1982; and Gurklis & Menke, 1988).

Procci (1981) attributed the incidence of hemodialysis-related stressors to the enormous time requirement, sexual dysfunction, dietary restrictions, and the progression of related complications that often accompany hemodialysis.

Baldree, Murphy, and Powers (1982) examined the type and severity of stressors and methods of coping with stress in 35 hemodialysis clients. Results showed that neither age, gender, nor marital status were related to the degree of stress perceived. The most frequently reported stressors were limitation of fluid intake, muscle cramps and fatigue, uncertainty concerning the future, limitation of food choices, and interference with employment opportunities and performance.

Bihl, Ferrans and Powers (1988) compared the stressors, quality of life and health status of 18 Continuous Ambulatory Peritoneal Dialysis (CAPD) clients, and 18 hemodialysis clients. There were no significant differences in the overall levels of stress between the two groups. However, there were differences in the specific stressors commonly reported by each group. The most troublesome stressors for the CAPD group were uncertainty about the future, limited time, and place for vacation. For the hemodialysis group, fatigue and boredom with the routine were the most troublesome.

Eichel (1986) compared the stressors and coping of 30 clients on CAPD with those of 30 clients on hemodialysis. CAPD clients reported lower levels

of stress than hemodialysis clients. The two groups reported similar or identical stressors. The most commonly reported stressors were fatigue, limitation of physical activity, muscle cramps, changes in body appearance, itching, and interference with all aspects of employment.

In this study, Pearson-Product Moment Correlations showed significant relationships among hemodialysis-related stressors, coping methods, and length of time on hemodialysis. Total stressor scores were related to the total coping scores, $r = .43$, $p < .001$, physiological stressors were significantly related to affective-oriented coping, $r = .38$, $p < .05$. However, psychosocial stressors were significantly related to affective-oriented coping, $r = .43$, $p < .001$, and problem-oriented coping, $r = .33$, $p < .05$. The length of time on hemodialysis was significantly related to problem-oriented coping, $r = .26$, $p < .05$. The relationship between stressors and coping did not duplicate the Baldree, et al. (1982) findings of no significant relationship between stressors and coping scores.

Fuchs and Schreiber (1988) compared perception of stressors in 30 subjects on hemodialysis and 30 subjects on CAPD. Perception of stress was measured by the Stressors Assessment Scale (Fuches and Schreiber, 1988), a combination of Baldree's (1982) Hemodialysis Stressors Scale, and Luby's (1984) CAPD Stressors Scales. The total number and intensity of stressors

perceived by clients on hemodialysis and CAPD were not significantly different. Only two stressors were significantly more stressful for hemodialysis clients than CAPD clients. Hemodialysis clients reported significantly more stress in the area of limited physical activity ($\underline{M} = 2.03$) than did CAPD clients ($\underline{M} = 1.5$), $\underline{t}\,(58) = 2.06$, $\underline{p} < .05$. Limited time or place for vacation was also found to be significantly more stressful for hemodialysis clients ($\underline{M} = 1.82$) than for those on CAPD ($\underline{M} = 1.07$), $\underline{t}\,(58) = 2.58$, $\underline{p} < .05$.

Gurklis and Menke (1988) replicated the Baldree, Murphy, and Powers study and investigated the relationship among hemodialysis-related stressors, coping methods, and length of time on hemodialysis in 68 hemodialysis clients. Findings from this study indicated that the most commonly reported stressors were feeling tired, limitation of fluid intake, limitation of food choices, limitation of physical activities, and frequency of hospital admissions.

Wright, Sands, and Livingston (1966) studied 12 patients on hemodialysis for periods of six to 33 months. The study sought to recognize and define the kinds of psychological stress posed by dialysis and to identify the variety of clients' reactions and adaptations to such stress. Results showed that the perception of psychological stress in hemodialysis clients is related to the client's self-image which includes: efficiency on the job, economic status,

aspirations for the future, and physical appearance. These stressors were associated with the incidence of depression and depressive moods.

Summary

Although the results of the above reported studies should be interpreted with caution because of their use of small convenience samples, they provide preliminary evidence of the different perceptions of dialysis-related stressors among clients on maintenance hemodialysis and those on CAPD. Few studies compared the perception of stress of in-center hemodialysis and CAPD clients to those on home hemodialysis. Such studies might result in dramatically altered stress scores because of the different perceptions of stress levels among these groups of clients.

Moreover, the self-report scales used to investigate the perception of stressors may be compromised by the social acceptability and cultural values of some of the strategies. The use of instruments other than self-report would be legitimate in such studies. Future research should utilize larger samples and stronger design, in terms of sample selection, including a comparison of clients on home hemodialysis and CAPD.

## Conceptualization and Empirical Evidence of Social Support

The concept of social support has been the subject of interest and research attention since the mid-1970s. Much of the interest has been directed toward the definition of social support, its measurement, and its effects on health and well-being. The following section focuses on the theoretical conceptualization of social support and its measurement as supported by empirical evidence.

Numerous researchers have provided conceptual definitions of social support, often related to their areas of practice and educational backgrounds. For example, Caplan's (1974) definition of social support originated from preventive psychiatry and community mental health, Cobb's (1976) from psychosocial epidemiology, and Cassel's (1974) from epidemiology. Although the terms may sometimes be used interchangeably, it is important to distinguish social support as " the psychosocial and tangible aids provided by the social network and received by a person" from social network as " the structural interrelationships of family, friends, neighbors, coworkers, and others who provide support" (Tilden & Weinert, 1987, p. 614).

Theoretical conceptualizations of social support can be organized into five categories: (a) structure and function (Cassel, 1974; Caplan, 1974),

(b) perceived social support (Weiss, 1974; Cobb, 1976), (c) function (House, 1981), (d) actions (Barrera, 1986), and (e) reciprocal process (Shumaker & Brownell , 1984).

Cassel (1974) conceived social support in terms of person-environment fit. He argued that social ties interact with environmental conditions. When this interaction is disrupted, social ties alone provide the individual with inadequate support, which leads to high susceptibility to physical, social, and psychological illness. The term "social feedback" was identified by Cassel (1974) as an important element of social support.

Caplan (1974) integrated Cassel's concept of "social feedback" and used the term "social system" to indicate "continuing social aggregates" of people that provide and receive feedback from each other. Caplan (1976) defined a support system as "such support that may be of a continuing nature of intermittent and short-term and may be utilized from time to time by individuals in the event of an acute need or crisis. Both enduring and short-term supports are likely to consist of three elements: (a) the significant others help the individual mobilize his psychological resources and master his emotional burdens; (b) they share his tasks; and (c) they provide him with extra supplies of money, materials, tools, skills, and cognitive guidance to improve his handling of his situation" (p. 20). This definition incorporated both

structural and functional domains of social support and incorporated the social network within the concept of social support.

The concept of perceived social support was emphasized in both Weiss (1974) and Cobb's (1976) definitions. Weiss (1974) saw social support as relational provisions that require relationships. These relationships are expected to provide one or a combination of the six functions of social support that are necessary for well-being.

These functions include: (a) attachment through which individuals gain a sense of security and place; (b) social integration, which gives individuals an outlet to share concerns and exchange services; (c) the opportunity for nurturance, through which individuals take responsibility to fulfill others in need and thereby develop a sense of being needed; (d) reassurance of worth, which provides individuals with a sense of being competent in performing their social roles; (e) a sense of reliable alliance, to provide individuals with continuous assistance from kin ties regardless of mutual affection or reciprocity of support; and (f) the obtaining of guidance, which lends emotional support and direction for reappraisal of the stressful situation. Weiss (1974) identifies the functions of both social support resources and the functions of perceived social support.

The latter part of Weiss's (1974) definition overlaps Cobb's (1976) definition of social support. Cobb (1976) defined social support as "information belonging to one or more of the following three classes: (1) information leading the subject to believe he is cared for and loved, (2) information leading the subject to believe he is esteemed and valued, and (3) information leading subject to believe that he belongs to a network of communication and mutual obligation" (p. 302).

House (1981) emphasizes the interpersonal transactions of social support resources, which may vary according to the relevance of the support to the problem and the person requiring support. He suggested a four-part definition including: (a) emotional support, such as providing empathy, caring, love, and trust, (b) instrumental support, referring to tangible aid lent to individuals during crises, (c) informational support, which involves provision of information to assist individuals in coping with life stress, and (d) appraisal support, which entails the transmission of information relevant to an individual's self-evaluation.

Barrera (1986) organized the social support concept into three broad categories: enacted support, social embeddedness, and perceived social support. Enacted support refers to the actions people take in providing assistance to others in crisis. He argued that enacted support explains the positive

relationships between social support and both stress and distress. Social embeddedness refers to an individual's connection to significant others in his or her social environment, and it may predict psychological distress which is independent of life stress. Perceived social support refers to an individual's cognitive appraisal of being connected to a social network. In the literature, perceived social support consistently shows negative relationships with distress, life stress, and strain (Barrera, 1986).

Social support, as a reciprocal process, was emphasized by Shumaker and Brownell (1984). They defined social support as "an exchange of resources between at least two individuals perceived by the provider or the recipient" (p. 13). Their definition emphasizes the concepts of reciprocity and perception and the potential and/or actual cost and benefit of social support resources and functions (Shumaker & Brownell, 1984).

Social exchange and equity theories propose that human relationships involve reciprocated exchange of mutually rewarding activities. This exchange produces costs and conflicts. Based on social exchange theories, the positive and negative subdimensions of social support, including cost, conflict, reciprocity, and equity should be considered. Using these theories as a conceptual framework, a scale was developed to measure the cost and reciprocity of social support (CARSS) (Tilden & Galyen, 1987).

Based on subsequent use of the CARSS Scale, Tilden and Weinert (1987) concluded that the ability of an individual to reciprocate support received affects both the social network and the quality of support provided by one's social network. Clients with chronic illness are often unable to reciprocate support received, which places additional stress on their social networks.

Based on Mitchell's social network theory, Kaplan, Cassel, and Gore (1977) organized the dimensions of social support to incorporate several interactional properties. These properties include: (a) content-the meaning that people give their relationships, (b) directedness- the reciprocity of relationships, (c) intensity-the obligation and commitment, and (d) frequency-the number of interactions.

Stewart (1989 & 1993) provided a range of broad theories that explained the diversity of theoretical interpretations of social support. They included attribution, coping, social comparison, social exchange, social learning, and loneliness theories.

According to attribution theory, individuals search for causes to help understand, predict, and control their environment based on relative values and the importance of internal and external factors. Therefore, when an individual assigns a specific cause to the problem and exercises control over the problem,

to either internal or external factors, he influences the helping relationship (Stewart, 1989).

According to coping theory, coping involves three cognitive processes: primary, secondary, and reappraisal. Perception of social support is one element in the individual's appraisal of the significance of specific stressors for well-being. Moreover, it is considered as a potential coping resource (Stewart, 1989).

According to social comparison theory, individuals tend to evaluate themselves and formulate information about their own characteristics, behaviors, opinions, and abilities by comparing themselves with others. The process of comparison in which social support operates depends on the direction and dimension of comparison that influences emotions, coping effectiveness, and prevention (Stewart, 1989).

Social exchange theory emphasizes the reciprocal nature of social support. This theory postulates that social support is an exchange of resources between the donor and the recipient of the support (Stewart, 1989).

Social learning theory holds that: (a) the individual's perception of his capabilities affects his behavior, thinking, and emotional reaction to stressful events, and (b) that personal and situational factors affect coping behaviors and individuals' transactions with their social environments (Stewart, 1993).

Loneliness theory emphasizes the importance of social relationships and the affective dimension of support (Stewart, 1989).

These theories incorporate the concepts of appraisal and helping in their explanations of social support. The significant implications of these theories lie in their usefulness in guiding assessment, planning, and intervention in clinical practice. Evaluation of such interventions should be directed toward enhancing the coping behaviors of individuals, reciprocity of support, internal and external attributions, and help-seeking from a social support network (Stewart, 1989).

The diversity of theoretical conceptualizations of social support concept led researchers in various disciplines to empirically measure its different dimensions and distinctions. Social relationships, social networks, and functional contents have been used as measures of social support. Social relationships can be measured in terms of existence, quantity, or frequency of social contacts. These are relatively objective and reliable measures for operationally defining the social support concept. Social network measures include size, homogeneity, reciprocity, duration, and density. Several studies have attempted to measure social support in terms of its functional contents and not merely the existence of the structure of the social relationships (House & Khan, 1985).

Other studies have been directed toward the measurement of perceived, received, and enacted support (Barrera, 1986; Tardy, 1985). Griffith (1985) suggests that qualitative measures of social support are superior to quantitative approaches because of their greater ability to predict personal adjustment.

Cohen and Wills (1985) proposed that future research in social support include: (a) incorporating several aspects of social relationships, such as existence, quantity and quality, network structure, and functions of social support; (b) measurement of network structure, including density, reciprocity, and network composition; (c) measurement of the quality and quantity of specific types of support functions independent of the number of persons providing such types of support; and (d) measuring emotional support first on a social support scale because of its clear direct and buffering effects on health.

Summary

The above review of the conceptualization of social support suggests its combination of structural, functional, and interactional properties as well as multidimensionality of the concept and its effect on health, health behaviors, and well-being. Theoretical conceptualization and empirical studies examined various aspects of the concept of social support to arrive at a consensus as to its definition, measurement, and effects on health and well-being. Ongoing research directed toward operationalization of the concept and investigation of

its main and buffering effects on health may help in developing a comprehensive theory that will capture its complexity.

Although the concept of social support has been studied extensively by researchers from various disciplines, several conceptual controversies remain. Stewart (1993) identified two conceptual controversies that should be clarified in future research: (a) the negative properties of social interactions and social relationships, and (b) the relationships among stress, coping, support, and health. Norbeck and Tilden (1988) assert that there has been insufficient qualitative and longitudinal study design to study the concept of social support. Such designs are of great importance to test whether social support is a universal construct. A collaborative effort among nurse researchers, theorists, practitioners, and educators should be directed toward closing the gaps in the conceptualization and measurement of social support.

## Conceptualization and Empirical Evidence of Coping

The concept of "coping" has received much attention in the literature during the past three decades. The ability of an individual to cope with stressful life events is an essential predictor of his /her well-being (McHaffie, 1992). The origin of this concept emerged from two approaches, animal experimentation, and psychoanalysis. The animal model defines

coping as "acts that control aversive environmental conditions, thereby lowering psychophysiological disturbances" (Lazarus & Folkman, 1984, p. 118). According to the psychoanalytic model, coping is defined as "realistic and flexible thoughts and acts that solve problems and thereby reduce stress" (Lazarus & Folkman, 1984, p. 118). The latter model focuses on the person-environment relationship and the individual's perception and thinking as important aspects of managing stressful situations and overall adaptation.

Coping can be viewed from three different perspectives: (a) reductionist, or a simple Stimulus-Response (S-R) model; (b) interactionist, in which coping is viewed as a function of personal and environmental characteristics; and (c) transactionists, in which personal and environmental characteristics influence each other and determine the type of coping responses (Aldwin, 1994). The latter perspective corresponds with Lazarus and Folkman's cognitive theory of stress and coping.

Lazarus and Folkman (1984) defined coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). This definition sees coping as: (a) person-oriented, (b) a process that requires efforts based on the level of stress, (c) excluding of behaviors that do

not require efforts, and (d) distinct from mastery (Lazarus & Folkman, 1984). Pearlin and Schooler (1978) defined coping as "behavior that protects people from being psychologically harmed by problematic social experience, a behavior that importantly mediates the impact that societies have on their members" (p.2).

Carver, Scheier, and Weintraub (1989) proposed several dimensions of coping. These include active coping, planning, suppression of competing activities, restraint coping, seeking social support for instrumental and emotional reasons, positive reinterpretation and growth, acceptance, turning to religion, focusing on and venting emotion, denial, behavioral disengagement, mental disengagement, and alcohol-drug disengagement.

Lazarus and Folkman (1984) make a distinction between coping outcomes and coping functions. Coping outcomes refer to the effects of certain coping strategies, while coping functions refer to the objectives that certain coping strategies fulfill when used by a person to manage a stressful situation.

Lazarus and Folkman (1984) identified two types of coping which serve different functions: (a) problem-focused coping, which focuses on managing or changing the problem with the stressful environment; and (b) emotion-focused coping, which focuses on regulating the emotional responses resulting from the stressful situation. These functions have also been identified by

George (1974), Khan, Walfe, Quinn, Snoek, and Rosenthal (1964), and Murphy (1974).

Problem-oriented coping is more often used when the individual appraises the stressful situation as one that can possibly be changed (Lazarus & Folkman, 1984). Khan, Walfe, Quinn, Snoek, and Rosenthal (1964) reported two categories of problem-oriented coping strategies: (a) those directed toward the environment, and (b) those directed toward oneself.

Emotion-focused coping is commonly used when the individual cognitively appraises a situation as being harmful, threatening, or challenging and deems that nothing can be done to change the environment. This type of coping includes avoidance, minimization, distancing, selective attention, positive comparisons, and wresting positive value from negative events.

The relationship between problem-focused and emotion-focused coping was described by Lazarus & Folkman (1984). They claim that these two major forms of coping can mutually facilitate one another.

Most of the research on coping focused on how people cope with the stressors of chronic illness and those of various prolonged treatment modalities. Moreover, the majority of the coping research has focused on either the process or the outcome of coping. Such research ignored the additive contribution of

both aspects of coping to the development of body of scientific knowledge related to the concept of coping.

Folkman & Lazarus (1980) conducted a study on 100 middle-aged community residing adults to identify the coping methods they used to manage the stressful events of daily living. Results showed that the subjects used both forms of coping in every stressful situation.

Ali and Khalil (1991) conducted a study to identify stressors, levels of stress, coping strategies, and coping effectiveness among 64 Egyptian female mastectomy clients. Data were collected using a structured interview method. Coping strategies reported by subjects were categorized into four groups: faith, compliance with medical regimen, seeking information and social support, and self-distraction. Coping effectiveness was measured by McNett's Coping Effectiveness Questionnaire (MCEQ). Subjects reported a mean of 5.05 (possible range of scores is 2-10) for the social functioning variable of the MCEQ and a mean of 15.30 (possible range of scores is 6-30) for the well-being variable. The mean for the total scale was 20.34 (possible range of scores is 8-40). Coping strategies reported by subjects were both emotion-focused and problem-focused. The reported coping strategies reflected the degree of religious adherence, as most of the subjects reported

faith as their first strategy for enhancing their ability to cope with chronic illness.

Wineman, Durad, and Steiner (1994), in a cross-sectional study, compared the coping behaviors of 433 subjects with multiple sclerosis (MS) and 257 with spinal cord injury (SCI). Coping was measured by Ways of Coping Checklist (WCC) (Folkmam and Lazarus, 1988). Illness uncertainty was measured by Mishel Uncertainty in Illness Scale (Mishel, 1988). Stressfulness of situations involving life with disability and illness was measured by the Appraisal Scale (Folkman and Lazarus, 1985). Multivariate analysis of variance showed that there was no significant difference between the two groups for the use of emotion-focused coping (EFC) or problem-focused coping (PFC). However there was a significant difference in illness uncertainty between the two groups, both in the use of EFC, $F = 12.96$, $p < .01$, and PFC, $F = 2.56$, $p < .05$. Coping behaviors were also significantly different depending on the individual's appraisal (danger or opportunity) of the situation involving life with a disability.

Correlations between types of coping and types of appraisal for each group were statistically significant. For the MS group, there were statistically significant correlations between EFC and danger appraisal, $r = .46$, $p < .01$, and between PFC and opportunity appraisal, $r = .37$, $p < .01$. Significant

correlations r were also found for the SCI clients between EFC and danger appraisal, $r = .39$, $p < .01$, and between PFC and opportunity appraisal, $r = .45$, $p < .01$. For both groups, there were no statistically significant correlations between EFC and opportunity appraisal. There were no statistically significant correlations found when the two groups were compared. These results suggest that for both groups higher danger appraisals were associated with more EFC, while higher opportunity appraisals were associated with more PFC.

For the MS group, EFC and PFC accounted for 44% of the variance in emotional well-being, while they accounted for 33% of the variance in emotional well-being for the SCI group when EFC and PFC were treated as the only independent variables in the hierarchical regression. Both types of coping behaviors did not account for any variance in the emotional well-being when all the variables (demographics, functional ability, time since diagnosis, uncertainty, danger appraisal, emotion-focused coping, and problem-oriented coping) were entered in the hierarchical regression. These results suggest that researchers should be more careful in selecting instruments to measure coping in chronically ill and disabled clients in order to detect the differences in their coping abilities. The cross-sectional design of this study limits the

understanding of the dynamic process of relationships among the study variables.

Coping behaviors of clients on hemodialysis have been studied by Baldree, Murphy and Powers (1982); Eichel (1986); and Gurklis and Menke (1988). Baldree, Murphy, and Powers (1982) investigated the types and severity of stressors and methods of coping with stress in 35 clients on hemodialysis. The types and severity of stressors were measured by the Hemodialysis Stressors Scale (HSS) (Baldree, et al. 1982). Coping behaviors were measured by Jalowiec Coping Scale (Jalowiec & Powers, 1981).

Results showed that the seven most frequently identified coping behaviors were hope, maintaining control, prayer and trust in God, looking at the problem objectively, worry, acceptance of the situation, and thinking through different ways to solve the problem. The least frequently identified coping behaviors were blaming or taking out tension on someone else, the use of drugs or alcohol, and letting someone else handle the situation. The mean for the affective-oriented subscale was 59.03, ($\underline{SD}$ = 10.41), while the mean for problem-oriented subscale was 47.03, ($\underline{SD}$ = 9.18). Subjects scored significantly higher on the problem-oriented subscale $\underline{t}$ (34) = 7.06, $\underline{p} >$. 001.

The latter finding was supported by the Jalowiec and Powers (1981) study of stress and coping in hypertensive and emergency room clients seeking

medical care for nonserious acute illness. These results suggest that as the illness of ESRD progresses and the treatment of hemodialysis continues, clients may use more PFC to deal with the specific stressors of the illness and the treatment.

Eichel (1986) examined the stress factors and coping strategies in 30 clients on CAPD and 35 clients on hemodialysis. The HSS was used to measure stress in both groups. Minor revisions of the scale were made to adapt it for CAPD clients. Coping behaviors were measured by the Jalowiec Coping Scale (1981). Results showed that the most frequently used coping strategies were trying to maintain control and trying to find out more about the situation. For the CAPD group, the proportional score on the affective-oriented subscale ($\underline{M} = 0.40$, $\underline{SD} = 0.09$) was significantly lower, $\underline{t}\ (27) = 6.9$, $\underline{p} < .001$, than the score on the problem-oriented subscale ( $\underline{M} = 0.59$, $\underline{SD} = 0.15$).

Comparison of the total coping scores between the two groups showed that CAPD clients scored significantly lower, $\underline{t}\ (63) = 3.5$, $\underline{p} < .001$, than did the hemodialysis clients. This finding contributed to the difference found for the total coping scale. There was no significant difference between the CAPD and the hemodialysis groups for the problem-oriented subscale. The researcher attributed these results to the fact that the CAPD subjects were more independent and were trained to be responsible for problem-solving related to

their dialysis. Therefore, in order for these clients to achieve the expectations of the health care providers, they tended to use problem-oriented strategies. Moreover, clients on hemodialysis experience high levels of stress during which problem-oriented strategies may not be sufficient, and they tend to use a combination of affective-oriented and problem-oriented coping.

Gurklis and Menke (1988) replicated the Baldree, Murphy, and Powers (1982) study. They examined the relationships among hemodialysis-related stressors, coping methods, and length of time on hemodialysis in 68 hemodialysis clients. The incidence and severity of stressors were measured by Hemodialysis Stressors Scale (Baldree, et al., 1982). The Jalowiec Coping Scale (Jalowiec & Powers, 1981) was used to measure the coping behaviors clients used in response to stress.

Results showed that the most frequently reported coping methods were prayers, maintaining control, acceptance, and hope. The least frequently reported coping methods were: drinking alcohol, taking drugs, and blaming others. The mean for the total coping scores was 95.10 ($\underline{SD}$ = 19.65). The mean for the affective-oriented subscale was 52.50, ($\underline{SD}$ = 19.65). The mean for the problem-oriented subscale was 40.71, ($\underline{SD}$ = 10.86). The proportional score of the problem-oriented subscale ($\underline{M}$ = .54, $\underline{SD}$ = .14) was significantly

higher, $t = 10.93$, $p < .0001$, than the affective-oriented subscale score ($M = .42$, $SD = .08$).

These findings are consistent with Baldree, et al. (1982) in which hemodialysis subjects used more problem-oriented coping than affective-oriented coping. The use of prayers, trust in God, and maintaining control were highly ranked by the study subjects. These results were supported by Greenburg, et al. (1975), Baldree, et al. (1982), and Ali & Khalil (1991). Greenburg, et al. (1975) attributed the used of these coping strategies by hemodialysis clients to the fact that they use religion to cope with the anxiety surrounding death.

Summary

Regardless of the diversity of coping conceptualizations, types, and functions reported in the literature, coping is generally aimed at regaining, restoring, and maintaining physical, psychosocial, and emotional equilibrium which has been disrupted as a result of internal and external demands placed upon the individual. Both types of coping identified in the literature, problem-oriented and emotion-oriented, are used by clients with chronic illness and those experiencing specific treatment stressors. Empirical evidence provided by the findings of these studies suggests that identification of coping behaviors used by clients with various chronic illness under prolonged

treatments provides important and valid information for planning interventions. These interventions should be individualized and aimed to enhance clients' coping strategies and contribute to better health outcomes.

## The Impact of Social Support on the Use of Coping Methods

Interest in social support and coping research was influenced by prior studies suggesting that social support protects individuals from the negative effects of stress. However, there is a paucity of research focusing on the various mechanisms by which social support influences the coping process and its subsequent effects in reducing the risk for psychological and physical illness (Fondacaro & Moos, 1987).

Theoretical explanations that link aspects of social support to coping have been presented by several researchers. Heller and Swindle (1983) in their theoretical model of the relationship between social support and coping claimed that the use of social support during stressful life events depends on the availability of a supportive system, the individual's ability to obtain support, and the reaction patterns developed by the individual over time, including seeking support and other coping behaviors.

Cohen and Wills (1985), in their review of 44 research studies investigating the relationship between social support and well-being, concluded

that those studies supported the existence of both the main effect model and the buffering model in explaining the relationship between social support and well-being. The main-effect model of social support states that social support has a direct positive effect on well-being. This effect is attributed to the fulfillment of basic social needs through interaction of a supportive social network (Thoits, 1982).

The main-effect of social support can be equated with primary prevention, as explained by social inoculation theory (Pilisuk, 1982 ) and further demonstrated by (Gottlieb, 1987). Gottlieb (1987) suggests that the contribution of social support to primary prevention can be accounted for in two ways: (a) by protecting health against the negative effects of stress at times of crisis, and (b) by enhancing the health and morale of individuals in everyday life.

The stress-buffer theory postulates that support protects people from the harmful effects of stressful situations and enhances their coping abilities (Stewart, 1993). Dean and Lin (1977) emphasized the importance of understanding the stress-buffering function of social support for primary prevention. Cobb (1976) claimed that supportive interactions "can protect people in crisis from a wide variety of pathological states: from low birth to death, from arthritis through tuberculosis to depression, alcoholism, and other

psychiatric illness..... can reduce the amount of medication required and accelerate recovery and facilitate compliance with prescribed medical regimens" (p. 310).

House (1981) provided another explanation for the buffering effects of social support. He claimed that provision of adequate support provides a solution to the problem, reduces the perceived importance of the problem, and tranquilizes the neuroendocrine system, which leads to reduced reactivity to perceived stress and facilitates health behaviors. Caplan (1974) described two functions of buffering: (a) provision of guidance and direction to help individuals restructure reality and find adequate solutions, and (b) provision of stability and comfort for individuals to rest and recuperate from the stress of daily life.

Based on the previous discussion, it is clear that the relationship between social support and health can be explained by two mechanisms. First, the stress-buffering role, in which it either affects the relationships between the stimulus and the stress reaction or the relationship between coping behaviors and the outcome responses, and second, the main role, in which it has a direct effect on morale and social functioning, which enhances well-being or acts as a primary prevention against stressful life events.

The relationship between social support and coping among chronically ill clients has been studied by Fondacaro and Moos (1987); McNett (1987); Saunders and McCorkle (1987); and White, Richter, and Fry (1992). Results of these studies suggested that social support influences the clients' appraisals of the stressful situations and engagement in health promoting behaviors that facilitate their coping processes.

Fondacaro and Moss (1987) examined the relationship between social support and coping in 380 clinically depressed individuals. Three social support variables were measured in this study: family support, work support, and number of close friends. Family support was measured by the Family Relationships Index (FRI), derived from the Family Environment Scale (Moos & Moss, 1986). Work support was measured by Work Relation Index (WRI) (Moos, 1986). Number of close friends was indexed by summing responses to two items related to the number of people and close friends that provide real help. Coping responses were measured by a procedure presented in Billing and Moos (1984) in which the responses were classified into:
(a) information/support seeking, (b) problem-solving, (c) affective regulation, and (d) emotional discharge. Stressful life events were measured by an adapted version of the Social Readjustment Rating Scale (Holmes & Rahe, 1967). Depression was measured by a list of symptoms derived from the Research

Diagnostic Criteria for Depression. Data were collected initially and 12 months later and analyzed separately for men and women.

Results showed that better-educated men used more problem-solving coping strategies, $r = .13$, $p < .01$. Older men depended less heavily on emotional discharge coping, $r = -.26$, $p < .001$. Men who experienced more negative life events reported having less available social support, $r = -.24$, $p < .01$, and used more emotional discharge coping, $r = .19$, $p < .01$. Severely depressed men used less problem-solving, $r = -.19$, $p < .01$, and more information/support seeking, $r = .19$, $p < .010$, and emotional discharge coping, $r = .36$, $p < .001$. Older women used more problem-solving, $r = .13$, $p < .01$, and less emotional discharge coping, $r = -.16$, $p < .01$. Women who reported more negative life events used all the four types of coping behaviors. Severely depressed women used less problem-solving, $r = -.29$, $p < .001$ , affective regulation, $r = -.21$, $p < .01$, and more emotional discharge coping, $r = .32$, $p < .001$.

To control for the sociodemographic variables that affect the relationship between support and coping, path analysis was computed. Results showed that women who perceived increases in family support also reported increases in problem-solving coping. Affective regulation and emotional discharge were not significantly related to family support among women.

Among depressed men, changes in family support were not related to changes in their use of problem-focused coping. Social support and coping did not have a predominant causal influence on one another.

The reported results of the study did not determine whether changes in family support precede or follow changes in problem-solving or whether the various modes of support and coping have reciprocal effects on one another. These results suggested that social support may positively influence adaptation through its impact on coping, and that this relationship was affected by gender and sources and types of support. The overall conclusion of the findings indicated that among clinically depressed individuals, the joint effect of social support and coping mediates the process of stress and adaptation.

Saunders and McCorkle (1987) conducted a study using a qualitative approach. Data were collected from 56 clients newly diagnosed with lung cancer one month after diagnosis and one month later. Secondary analysis of data collected from six subjects was done to explore the interaction of social support with coping strategies. The six subjects selected for data analysis reported high symptom distress and a consistent problem on both occasions of data collection.

Content analysis of data yielded the following findings: (a) patients were responsible for seeking information rather than expecting health care

professionals to provide information, (b) clients perceived their own coping efforts as merged with efforts of the health care providers involved with treatment, and (c) the most important problem-solving coping strategy identified by all subjects was radiation therapy. Subjects viewed the effectiveness of their coping strategies in terms of the efficacy of the radiation therapy, the pain medication prescribed, or how well they handled their problems and not in terms of how effective their own efforts had been in handling the problem.

McNett (1987) conducted a study of functionally disabled wheelchair-bound clients (N= 50) to test a causal model based on Lazarus and Folkman's (1984) stress and coping theory. The purpose of the study was to determine the effects of social support variables, threat appraisal, and coping responses on coping effectiveness. Social support variables included perceived availability of social support, perceived effectiveness of social support, and personal constraints to the use of social support. Perceived availability of social support was measured by the Interpersonal Support Evaluation List (ISEL) Cohen, Mermelstein, Kamarack, & Hoberman, 1985).

Three subscales of the ISEL were used: tangible, informational, and emotional support. Coping responses were measured by Ways of Coping Checklist (WCC) (Folkman & Lazarus, 1988). Coping effectiveness was

measured by the McNett Coping Effectiveness Questionnaire (MCEQ). Perceived effectiveness of social support and perceived personal constraints were each measured with a single item. The degree of threat was measured by asking the degree of concern caused by the subject's identified event. Data were analyzed using Pearson and point-biserial Product Moment Correlations and path analysis. Correlational analysis showed that the demographic variables could be confounding when examining the relationships among the study variables. Therefore, path analysis was used to control for such variables.

Results of path analysis showed that perceived availability of social support was significantly positively related to coping effectiveness through the mediating variables of problem-oriented coping, $\underline{B} = .49$, $\underline{p} < .01$, and emotion-oriented coping, $\underline{B} = -.59$, $\underline{p} < .01$. Perceived availability of social support was significantly positively related to the use of social support as was perceived effectiveness of social support, $\underline{B} = .45$, $\underline{p} < .01$. Perceived personal constraints were not significantly related to any causal model variables. Perceived availability of social support was related significantly to reduced threat appraisal, $\underline{B} = -.33$, $\underline{p} < .01$.

Threat mobilized social resources, but did not significantly influence the mobilization of other coping resources. The use of social support was not significantly related to coping effectiveness. The overall variance accounted

for by the study variables in the coping effectiveness was 61%. Separately, threat accounted for 37%, social support 52%, cognitive reappraisal 15%, emotion-focused coping 48%, and problem-focused coping 32% of the variance in coping effectiveness.

These findings are consistent with most of the relationships described in Lazarus stress and coping theory. The findings of the non-significant direct effects of social support on coping effectiveness may reflect the inability of functionally disabled clients to reciprocate social support. The latter finding was not anticipated, as researchers often ignore the costs of social support and its possible negative effects on coping effectiveness and outcomes.

O'Brien (1993) investigated the relationships of self-esteem and social support to problem-focused behaviors of 101 clients with multiple sclerosis. Coping behaviors were measured by Ways of Coping Checklist (WCC) (Folkman & Lazarus, 1988). Self-esteem was measured by the Tennessee self-concept scale. Social support was measured by Norbeck Social Support Questionnaire (NSSQ). Results showed that the relationship between social support and problem-focused coping was not statistically significant, $\underline{r} = .126$. The combined effects of social support and self-esteem explained 4.3% of the variance in problem-focused coping. There was a significant relationship between social support and education, $\underline{r} = .21$, $\underline{p} < .01$, and between social

support and employment, $r = .20$, $p < .03$. These findings suggest that not all types of social support encourage problem-focused coping, especially among chronically ill clients who may be unable to reciprocate social support.

Correlations emerged between self-esteem, social support, and emotion-focused coping subscales. Results showed an inverse relationships between self-esteem and Wishful Thinking Scale (WTS), $r = -.274$, $p < .003$, and between self-esteem and the Detachment Scale (DS), $r = -.172$, $p < .04$. These findings indicated that subjects who reported high self-esteem also reported using few emotion-focused coping behaviors. The findings of this study suggested that subjects with low self-esteem may not have the self-confidence necessary to initiate active oriented behaviors to cope with their stressful situations.

Kvam and Lyons (1991) examined coping strategies, social support, and general health status in 51 subjects with diabetes mellitus. Coping strategies were measured by Ways of Coping Checklist (Folkman & Lazarus, 1980). Perceived social support was measured by the Perceived Social Support measure (Procidano & Heller, 1983). General health status was measured by the General Well-being Schedule (Brook, Ware, Davies-Avey, Stewart, Donald, Rogers, Williams, & Johnston, 1979).

Multiple regression analysis showed that problem-solving coping had the most significant impact on general well-being, $r = .34$, $p < .002$. Subjects using problem-solving coping reported higher general well-being than those who fantasized about their diabetes. Wish-fulfillment coping was negatively correlated with general well-being, $r = -.36$, $p < .002$. Self-blame and social support seeking had no effects on general well-being, $r = -.004$, $p < .002$, and $r = .05$, $p < .002$, respectively. Positive-focus coping was slightly correlated with well-being, $r = .22$, $p < .002$. There was a slight negative correlation between self-coping and well-being, $r = -.27$, $p < .002$.

Correlations between coping and perceived support from family and friends showed no relationships. Perceived friend's support showed a significantly higher correlation with general well-being, $r = .42$, $p < .002$, than perceived family support, $r = .29$, $p < .002$ These findings suggested that diabetic education programs and support groups are expected to encourage diabetic clients' engagement in problem-solving coping skills, which ultimately lead to better general health.

Perry (1990) examined the relationship between loneliness and coping in 41 cancer patients. Loneliness was measured by the Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980). Coping was measured by the Jalowiec Coping Scale (Jalowiec & Powers, 1981 ). There was a

significant positive correlation, $r = .62$, $p < .001$, between loneliness scores and the emotive subscale. An inverse relationship was found between the confrontive subscale and the loneliness scale, $r = -.36$, $p < .01$. Also, there was a significant inverse correlation between organizational membership and the loneliness score, $r = -.31$, $p < .05$, suggesting that as organizational membership increased, loneliness scores tended to decrease. These results called for effective nursing interventions that are aimed at minimizing loneliness and facilitating positive coping methods to overcome the stressors imposed on clients with chronic illness.

Badger (1990) examined the coping methods, health perceptions, and marital adjustments of middle-aged men with chronic cardiovascular disease and their spouses (N = 84). Coping responses were measured by the 66-item Ways of Coping Checklist (Folkman & Lazarus, 1988). Health perceptions were measured by using the 22-item General Health Rating Index (GHRI) (Davies & Ware, 1981). Current marital adjustment was measured by the Dyadic Adjustment Scale (DAS) (Spanier & Filsinger, 1983). Multiple analysis of variance showed that men with chronic cardiovascular disease and their spouses were similar in their coping responses. Both partners used more emotion-focused coping strategies than problem-focused strategies to cope with illness.

Stepwise multiple regression analysis showed that education, gender, length of marriage, current health, prior health, and health outlook were significant but modest predictors for five of the eight coping subscales. Clients with higher educational levels and current health scores used less escape-avoidance and emotion-focused coping than confrontive coping. Clients with higher prior health scores used less positive reappraisal and seeking social support than other coping methods. There was a positive relationship between seeking support and gender. Gender accounted for an additional 17% of the total 29% variance in coping strategies. Increased use of emotion-focused and decreased use of problem-focused strategies among clients and their spouses were related to decreased perception of health. Length of marriage was a positive predictor for the use of emotion-focused distancing coping.

These findings suggested the importance of subjective health perception in predicting the choice of coping methods. Accurate and careful nursing assessment of such clients' perceptions would help nurses to plan and implement nursing interventions. Evaluation of the traditional nursing interventions regarding the use of problem-oriented over emotion-oriented coping is of great importance in clinical setting. This evaluation should focus

on encouraging clients to use emotion-focused coping, particularly in situations that are not amenable to change.

Powers and Jalowiec (1987) conducted a study on 450 hypertensive clients to identify the discriminant predictors of blood pressure control and adjustment to chronic illness. Psychological adjustment to chronic illness was measured by the Psychological Adjustment to Illness Scale (PAIS) (Derogatis, 1977). Health locus of control was measured by the Multidimensional Health Locus of Control Scale (Wallston, Wallston, & Devellis, 1978). Quality of life was measured by Cantril's Self-Anchoring Striving Scale (Cantril, 1965). Coping was measured by the Jalowiec Coping Scale (Jalowiec, 1981). Hypertension knowledge was assessed by 18 open-ended questions designed for this study. Dietary information was obtained by a dietary record and two self-rating items. General health and hypertension information were obtained from patient interviews and chart reviews. Hypertension control was assessed by physician judgment of the control status of the client at the time of the interview. Stress was measured by the subjects' rating of overall level of stress on a 3-point scale.

Subjects were classified into two groups based on hypertension control and adjustment to chronic illness. Seventy-seven percent of the subjects were classified as having controlled hypertension and 23% uncontrolled. Sixty-four

of the subjects had better adjustment to chronic illness, and 36% had worsened adjustment.

Discriminant analysis identified eight predictors as significant in predicting hypertension control. Nineteen variables were identified as significant predictors of adjustment to illness. Greater use of problem-solving coping, less social isolation, and higher quality of life were among the predictors of adjustment to the chronic illness. These findings suggested that well-adjusted clients use less destructive coping methods and rely more on significant others rather than handling the problem alone. The latter explanation supported previous research finding on the impact of social support on adaptation to illness.

Jalowiec and Powers (1981) compared stressful life events and coping behaviors in 25 emergency room clients with nonserious acute illness and 25 newly diagnosed hypertensive clients. Stressful life events (SLE) were measured by Stressful Life Events Scale (SLES) (Holmes & Rahe, 1967). Coping behaviors were measured by a 40-item Likert scale developed by the primary investigator. Emergency Room (ER) clients reported significantly more SLEs than did hypertensive clients, $t$ (48) = 2.37, $p$ <.05. Most of the reported SLEs for ER clients were in the personal and social categories of the SLE scale, while hypertensive clients reported physical health-related stressors.

Analysis of the coping behaviors showed that hypertensive clients used more coping methods in handling SLEs ($M$ = 28.88, $SD$ = 5.39) than did ER clients ($M$ = 25, $SD$ = 8.59). Four of the five most commonly used coping behaviors were the same for both groups. These coping behaviors included hope, control, objectivity, and abstract problem-solving. Hypertensive clients reported significantly higher scores on problem-oriented coping, $t$ (24) = 2.05, $p$ <.05, than ER clients. Comparison of the use of the two types of coping behaviors for each group revealed that both groups used more problem-oriented than affective-oriented coping, hypertensive $t$ (24) = 7.28, $p$ <. 001; ER $t$ (24) = 3.95, $p$ < .001. Findings indicated differences in the perception of stress among acute and chronically-ill clients.

Despite the similarities in the use of both types of coping behaviors, evidence of differences in coping behavior between both groups was apparent in this study. This suggests a balance between problem-oriented and affective-oriented coping behaviors is necessary in order to manage the stressful life events.

Summary

Theoretical models of the relationship between social support and coping suggested that social support has either direct (main) or indirect (buffering) positive effects on health, adjustment, and well-being. However,

empirical studies showed that this relationship is complex and affected by several factors. These factors include gender, level of education, source and type of support, reciprocity of social support, and self-esteem. Longitudinal studies should be conducted to further explain the relationships of social support to the identified variables. A more comprehensive measure of social support should be developed and tested with different populations in order to accurately test its relationship with other variables.

## The Influence of Social Support on Quality of Life

Interest in quality of life research has grown rapidly since the 1980s. Studies have focused on the issues that directly or indirectly affect quality of life and on developing instruments to measure quality of life among well clients and clients with chronic illness. Nursing literature has focused on certain phenomena associated with adaptation to chronic illness including hardiness, control, empathy, hope, quality of life, compliance, anxiety, and depression (Pollock, 1987). Few studies have focused on the client's psychological adjustment, and social functioning. This review of the literature focused on the conceptualization of the quality of life concept and the impact of social support on quality of life among hemodialysis clients. Many research studies and much theoretical literature have focused on the relationship between social support

and health and illness (Cassel, 1974; Cohen, 1988; Dean & Lin, 1977; Kaplan, Cassel, & Gore, 1977; Wallston, Alagna, DeVellis, & DeVellis, 1983; ). However, the processes and mechanisms of these relationships have not been studied in depth and still remain unclear (Stewart, 1993).

Conceptualization of Quality of Life

In the literature, the terms "quality of life" and "life satisfaction" have often been used interchangeably. Moreover, no consistent definition of these terms was found. George and Bearon (1980) defined quality of life as having both subjective and objective dimensions. The subjective dimension refers to an individual's self-report of his or her relative satisfaction with life, self-esteem, self-regard, self-acceptance, self-concept, and self-image. The objective dimension refers to an individual's general health, functional status, and socioeconomic status. Szalai & Andrews (1980) stated that the best approach to measurement of quality of life is to combine both subjective and objective dimensions.

Levine (1987) stated that "the concept of quality of life goes beyond the idea of activities of daily living" (p. 4). Daily living does not necessarily encompass the social dimensions of quality of life, which include performance of social roles, mental acuity, emotional state, sense of well-being, and relationships with others.

Quality of life can be assessed both objectively and subjectively. The objective approach contends that health, physical environment, income, housing, and other observable and quantifiable indicators are valid measures of quality of life. These indicators are culturally bound and are amenable to changes depending on their importance or value to individuals (Campos & Johnson, 1990). Campos and Johnson (1990) have identified problems with using objective approaches to assess quality of life indicators. There is disagreement about which quality of life indicators are relevant and a lack of understanding of the relationship between objective aspects of life and the subjective perception of these aspects.

Subjective approaches are concerned with the assessment of people's perceptions of life experiences and feelings regarding quality of life. These approaches are not linked to specific absolute or standard indicators. Based on several studies using subjective approaches to assess quality of life, a number of dimensions linked to quality of life were identified: (a) positive social relationships, (b) stability and conformity to a set of role expectations, and (c) disparity between expectations and achievements. Measures of quality of life should combine both approaches to assess both the general values of the group and the specific concerns and feelings of the individual (Campos &

Johnson, 1990).

Ferrans and Powers (1985) conceptualized quality of life as including satisfaction with various domains of life and the importance of these domains to the individual. Based on this conceptualization, Ferrans and Powers developed the Quality of Life Index (QLI) to measure quality of life among healthy individuals. The QLI measures the following domains: health care, physical health and functioning, marriage, family, friends, stress, standard of living, occupation, education, leisure, future retirement, peace of mind, personal faith, life goals, personal appearance, self-acceptance, general happiness, and general satisfaction.

Ferrans (1990) further conceptualized quality of life as having four major domains: health and functioning, socioeconomic, psychological/spiritual, and family. Based on these domains, she developed an instrument to measure quality of life in clients with cancer. The QLI measures 35 aspects of life within the four identified domains and incorporates the clients' perceptions of values and satisfaction. Ferrans and Powers (1993) defined quality of life as "a person's sense of well-being that stems from satisfaction or dissatisfaction with the areas of life that are important to him/her" (p. 29). For the purpose of this study, quality of life was defined as the individual's satisfaction with his/her

total well-being, including psychosocial and physical aspects of life. Thus, the focus was on the subjective measurement of quality of life.

Quality of life of clients with ESRD

The quality of life of clients with ESRD on different treatment modalities has been studied by several researchers (Bihl, Ferrans, & Powers, 1988; Ferrans & Powers, 1993; Hauser, Williams, Strong, Ganza, & Hathaway, 1991; Hoothay, DeStefano, Leary, & Foley-Hartel, 1990; Laborde & Powers, 1980; Molzahn, 1991; Stegman, Duncan, Pohner, & Sandstrom, 1985; and White, Ketefian, Starr, & Voepel-Lewis, 1990). Findings of these studies supported the positive impact of social support on clients' health status.

Bihl, Ferrans, and Powers (1988) compared stressors, quality of life, and health status of CAPD (N=18) and hemodialysis (N=18) clients. The type and severity of hemodialysis-related stressors were measured by the Hemodialysis Stressors Scale (HSS) (Baldree, Murphy, & Powers, 1982). The HSS was modified to measure the stressors among CAPD clients. Quality of life, satisfaction with health and functioning, socioeconomic aspects of life, psychological/spiritual aspects, and family were measured by the QLI. Health status was measured by a 10-point scale which assessed the subjective perception of health. This scale was based upon the Self-Anchoring Scale developed by Cantril (1965). The biophysiological equilibrium was measured

by measurements of serum creatinine, serum potassium, blood urea nitrogen, mean arterial pressure, and weight gain.

Results showed no significant differences between the two groups in the overall quality of life or satisfaction with health and functioning, socioeconomic, psychological and spiritual aspects, and family. Perceived health was significantly related to quality of life. These results were inconsistent with previous research studies in which CAPD clients reported improved well-being and greater life satisfaction after shifting to CAPD. Hemodialysis clients reported less satisfaction with health and functioning than with psychological/spiritual aspects of life. These results were expected, since most of the reported stressors among hemodialysis clients were related to health and functioning.

Ferrans and Powers (1993) assessed the quality of life of 349 hemodialysis clients. Quality of life was measured by the dialysis version of QLI (Ferrans, 1990; Ferrans & Powers 1992). The QLI measures the client's perceived quality of life, and is divided into two sections. Section I assesses how satisfied the subjects is with 32 aspects of life. Section II assesses the importance of those same aspects to the subjects. The scale consists of four subscales: health and functioning, social and economic, psychological/spiritual, and family subscales.

Results showed that clients were generally satisfied with the areas of life that were important to them. These results were slightly lower than what was reported in a study of a healthy population. Results of the four domains of quality of life measures (health and functioning, social and economic, psychological/spiritual, and family) showed that subjects were more satisfied with the things they valued in the family domain than in the other domains. The mean scores for the family subscale were significantly higher ($\underline{M}$ = 25.25, $\underline{SD}$ = 5.07) than the means of the other three subscales. The mean score for the health and functioning subscale was significantly lower ($\underline{M}$ = 18.64, $\underline{SD}$ = 5.71) than the means for the other subscales. There was no significant difference between the social and economic and psychological/spiritual subscales. The latter is consistent with results of other studies of dialysis clients.

Laborde and Powers (1980) compared the past, present, and future life satisfaction of hemodialysis clients (N=20) and those suffering from osteoarthritis (N=20). Life satisfaction was measured using Cantril's Self-Anchoring Life Satisfaction Scale. Results showed that clients on hemodialysis viewed present life satisfaction higher than did clients with osteoarthritis $\underline{F}$ [1, 114] = 4.81, $\underline{p} < .05$. Future life satisfaction was slightly better for dialysis clients compared to arthritis clients, but not significantly so.

There was no difference in the past life satisfaction between groups. The researchers attributed the increased life satisfaction among dialysis clients to an increased sense of well-being because of the procedure.

The researchers stated that although hemodialysis treatment is stressful and life-threatening form of treatment, it increases clients' physiological well-being in terms of prolonging life and overcoming the threat of treatment. The past life of hemodialysis clients prior to the treatment may have represented illness, and the present may represent a state of wellness, comparatively. Another explanation was that the social interaction between hemodialysis clients and health care providers becomes an important part of the client's life and enhances the client's ability to cope with the stressful nature of the treatment. For arthritis clients, chronic pain and living alone deprive them from the support system that might help them cope with the stressors of chronic illness.

Stegman, Duncan, Pohner, and Sandstrom (1985) studied the quality of life of 42 hemodialysis clients. Quality of life was measured by the Cantril's Self-Anchoring Striving Scale (SASS) at three points in time: past, present, and future. The subjects' physical ability was measured by the Additive Activity Profile Test (ADAPT) (Daughton, Fix, Kass, Bell, & Patil, 1982).

Results showed that the median score was highest for the present quality of life (7) and lowest for perceived current health state (5). The most frequently reported verbal response to the SASS were for best possible life (37%) and health states (41%), and that the absence of kidney diseases contributed to their optimal quality of life and health status. The mean score for ADAPT was 57.58, with a range of 18-104 and a possible range of 0-105. Clients who were able to perform more challenging physical activities scored higher on the ADAPT and were most satisfied with their present life and were more optimistic. Older subjects reported a higher quality of life, and women were more optimistic in terms of their future quality of life.

The overall quality of life and the perception of health status were not associated with subjects' vocational status. These findings indicated that physical activity was an inherent and consistent component of the quality of life and perceived health among hemodialysis clients.

White, Ketefian, Starr, and Voepel-Lewis (1990) studied stressors, coping, and quality of life as outcome measures among 55 kidney transplant clients. Quality of life was measured by asking the subjects two general questions on how they felt about their lives as a whole before their transplants and after their transplants.

Quality of life scores were significantly higher after the transplant than before, t (54) = -9.28, p < .01. The mean for quality of life before transplant was 3.45 (SD = 1.42), and the mean after the transplant was 5.65 (SD = 1.01). After transplant, quality of life scores were predicted from total stress and coping scores, R square = .18, F (2,52) = 5.8, p <. 01. Both total stress and total coping were important predictors of quality of life after transplant, while total stress was the important predictor of quality of life before transplant. These results suggested that before transplant, the stress level at which coping does not make a difference is very high , while after transplant, coping leads to better quality of life.

Social Support and Quality of Life Among Hemodialysis Clients

Based on the above conceptualizations of quality of life, this section focuses on the relationships between social support and physical and psychological well-being as predictors of quality of life among hemodialysis clients. Dimond (1979), Korniewicz and O'Brien (1994), Levy and Wynbrandt (1975), and Siegel, Calsyn, and Cuddihee (1987) found support for the positive effects of social support on quality of life.

Dimond (1979) examined the relationship among social support, medical status, and adaptation to chronic illness in 36 hemodialysis clients. Social support was measured on three dimensions: family environment (family

cohesion, family expressiveness), level of spousal support, and presence of a confidant. Family support was measured by two subscales of the Family Environment Scale (FES) (Moos & Insel (1974): family cohesion subscale, which measures the helpfulness and supportive behavior of family members, and family expressiveness subscale, which measures the encouragement of open expression of feelings within the family. Spousal support was measured by a 10-item 5-point scale developed by the investigator in collaboration with the nurses on the renal unit. Confidant support was measured by a single close-ended question to determine the presence or absence of a confidant. Adaptation was measured in terms of morale and changes in social functioning since the onset of dialysis (MacElveen, 1977; Gibson, Gibson, & Bergner, 1975)

Results showed that the social support variables were significantly and positively correlated with morale. The strongest correlation was between family expressiveness and morale, $r = .55$, $p < .01$. Family cohesion and availability of a confidant were significantly and negatively correlated with changes in social functioning. Greater expressiveness in the family, the presence of a confidant, and higher morale were associated with fewer medical problems. These results indicate that family cohesiveness is a key source of support for hemodialysis clients, and that adaptation to hemodialysis is partly a

function of specific dimensions of social support. This contribution will help nurse practitioners to plan and implement interventions that are beneficial for clients according to each stage of the adaptation process.

Korniewicz and O'Brien (1994) examined the effects of hemodialysis educational and support programs on physical and psychosocial adaptation to dialysis. A pretest/posttest modified Solomon experimental design with control group was employed. Data were collected at three-month intervals following the educational interventions. Results showed that provision of support and one-to-one teaching by nurses impacted the client learning experience. These findings indicate that nurses can facilitate active learning and engagement in self-care activities by hemodialysis clients to help them in the coping process. In this study the experimental group always scored higher on all measures of psychological adaptation than did the control group.

Levy and Wynbrandt (1975) studied the quality of life of 18 hemodialysis clients. Clients were interviewed about various medical, social, and psychological factors regarding three different points in their lives: before the onset of symptomatic kidney disease, while they were uremic but before hemodialysis, and while on maintenance hemodialysis. Quality of life for each subject was classified as "good", "fair", or "poor" on the basis of the degree to which he had resumed pre-illness life activities.

Results showed that most clients had severe loss in income and disruption of family life. Clients who had flexible psychosocial support systems before their illness exhibited successful emotional adaptations. Quality of life was rated by each investigator separately as "good" for six subjects only, "fair" for five, and "poor" for seven subjects. Women had much better life adjustments than men. This variation can be explained, in part, by the demands placed upon men to be productive at outside work. The women's successful performance of household activities provided more flexible demands and opportunities for assistance from family than outside work did for men. Therefore, the client's adjustment was mostly attributed to the nature of the supportive relationships.

Siegel, Calsyn, and Cuddihee (1987) examined the social support system, the impact of social support on stress of kidney disease, and social support as predictor of psychological adjustment of 101 clients on maintenance hemodialysis. Their findings showed that subjects considered their families the most important social support available to them. The quality of social support (how helpful the support was) provided by the family was positively related to psychological adjustment, and it explained 30% of the variance in psychosocial adjustment. Frequency of contact with friends and relatives was negatively related to psychological adjustment.

The Negative Impacts of Social Support

The previous review focused on the positive aspects of social support, in which supportive social relationships protect individuals from the negative effects of stressful life events, contribute to the physical and psychosocial well-being of individuals in crises, and enhance clients' adaptations to the changes of lifestyle that result from the stress of chronic illness. However, several researchers reported that social support can also be a source of additional stress and may have a negative impact on individuals' well-being.

The family unit can be a source of stress instead of support. When families encounter crises, such as illness of a family member, natural disaster, or unemployment, the adaptation process may become a source of continuing stress. The effects of adjustment may be more stressful or damaging than the stress of the original crisis. Although crises may lead to solidarity and cohesiveness of the family unit, at times if the adaptive responses within the family are superficial they become disruptive and lead to maladaptive behaviors such as isolation and deviancy (Kellner, 1966).

Rook (1984) examined the negative and positive impacts of social interactions on older women's well-being. One hundred and twenty elderly widows were interviewed about their backgrounds, psychological well-being, supportive social ties, problematic social ties, and involvement in social

activities. Results revealed little evidence that women with few positive social ties had many problematic ties. The number of social supports reported was unrelated to the number of social problems. The number of supportive others had no relationship to the number of problematic others. Moreover, some women who had low levels of social support reported high levels of social problems, while other women who had low support reported few problems.

These results suggest that positive and negative interpersonal experience were relatively independent of each other, at least, in this sample. They also suggest that negative social interactions have more potent effects on well-being than positive social interactions. Positive ties with others had a significantly positive relationship with well-being only when they involved positive affect and sociability rather than the actual provision of support. These findings underestimated the important role of specific qualities and contents of social support.

Summary

Clients on hemodialysis perceive various physical, psychological, and social stressors related to their treatment. These stressors impacts different aspects of their lives. Coping with these stressors requires clients to mobilize not only their social support resources, but the internal resources that enhance their adaptation process and promote their quality of life. Social support may

have an impact on coping behaviors used by clients and is perceived as the most appropriate strategy to manage the stressful situation and promote the quality of life in terms of physical and psychosocial adjustment. Social support is thought to have two effects in response to stress. A main (direct) effect and stress-buffering (indirect) effect through the use of coping behaviors. Both effects contribute to the client's physical, psychological , and social adjustment to the hemodialysis-related stressors. Tilden and Galyen (1987) suggest that in order to develop a base of knowledge regarding social support, the construct of "social support" needs to be conceptualized and measured within the context of human relationships and not as being "exclusively benevolent" (p. 17).

# CHAPTER III

# METHODOLOGY

This chapter describes the methodology used for this study. The description includes: the research design, sample, data collection procedures, pilot study, instruments used, translation procedure, and data analysis procedures.

## Research Design

A descriptive exploratory correlational research design was used for this cross-sectional study to explore the relationships among the study variables. Such a design aims to describe the relationships among the variables rather than establishing a cause-and-effect relationship (Polit & Hungler, 1991). According to Brink and Wood (1989), the correlational design is used when there is reason to suspect the existence of specific relationships among the variables that can be supported by previous research. It provides a foundation for more rigorous research and support for specific theoretical conceptualizations. In this study, exploration of the relationships between social support, coping behaviors, and quality of life in hemodialysis clients in Bahrain may contribute to the establishment of a body of scientific knowledge related to this aspect of caring for individuals with a chronic illness which requires prolonged medical treatment.

## Sample

Subjects for this study were drawn from a population which included all outpatient clients diagnosed with ESRD and were currently receiving hemodialysis treatment at the Kidney Care Units of Salmaniya Medical Center (SMC) and Bahrain Defence Force Hospital (BDF), Bahrain, during the period from May 15, 1995 to July 15, 1995. In May 1995, the total number of patients receiving hemodialysis was 86. The convenience sample was limited to clients who were: 18 years of age or older, able to speak Arabic, and not currently being treated for any episode of chronic psychiatric illness.

For this study, the selected sample included all the population and is homogenous with respect to the variables being measured. The response rate of a prior study of Bahraini hemodialysis clients (Suwaileh, 1990) was nearly 100%. The expected response rate for this study was at least 95%. With four predictor variables in the multiple regression analysis, a medium effect size of .387 (R square = .13), a significance level of .95, and a power of .80, a sample of 85 subjects was required for this study (Anderson, 1982).

## Data Collection Procedure

Upon the approval of the investigator's dissertation committee, the School of Nursing Departmental Review Committee, and the Institutional Review Board of The University of Texas at Austin, the data collection

procedure was initiated. Permission to conduct the study and to obtain the potential subjects' names and addresses was obtained from the Deputy Chief of Medical Staff at SMC, and the Major General and Commander of Medical Services at BDF hospital (Appendix A).

The investigator visited the units and gave a brief explanation of the study to the unit supervisors. The initial contact with potential subjects was through the unit supervisors who introduced the study to the clients. Those who met the inclusion criteria and were willing to participate were asked to submit their names to the unit supervisors. Submission of their names indicated the potential participants' willingness to be contacted by telephone for possible participation in the study. The investigator compiled the names, address, and telephone numbers of the potential subjects obtained from the unit supervisors. Potential subjects was contacted by telephone at home, at which time the investigator described the study. If the subject was willing to participate in the study, the investigator made an appointment for an interview at a mutually acceptable time and place. During this appointment, the investigator introduced the potential participant to the purpose of the study and method of participation by reading to him or her the Arabic version of the

introductory letter (Appendix B). Face-to-face oral assent was obtained from the potential participants by reading the Arabic version of the Information sheet (Appendix B).

Oral assent was preferred over written consent as it is not customary in Bahraini culture to ask clients to sign such a form. A signed written consent would lead some clients to think that participation was an unduly formal matter; others might be unable to read or write. Either would have affected the number of clients participating in the study.

A total of 86 clients were on maintenance hemodialysis during the data collection period. Sixty-one subjects were approached by the unit supervisor for possible participation in the study. One subject refused to participate, resulting in a response rate of 98%. Twenty-five clients were excluded from the study as they did not meet the inclusion criteria. Table 3.1 presents a summary of the reasons for exclusion from the study.

Participants were interviewed by the investigator using the Arabic translated versions of: (1) a single-item measure of availability of and satisfaction with social support resources, (2) the Personal Resource Questionnaire Part II (PRQ 85) (Weinert, 1987), (3) the Modified version of

**Table 3.1**

**Summary of the reason for exclusion from the study**

| Reason for exclusion | Number of Clients |
|---|---|
| In-patient | 2 |
| One home hemodialysis | 1 |
| Non-Bahraini | 4 |
| Can not speak Arabic | 3 |
| Confused/can not talk | 4 |
| Died during data collection period | 6 |
| Had kidney transplant | 3 |
| On hemodialysis for less than 4 weeks | 2 |
| **Total** | **25** |

Part A of the Jalowiec Coping Scale (JCS) (Jalowiec, 1991), (4) Cantril's ladder (Cantril, 1965), and (5) the demographic data questionnaire (Appendix C). All interviews were conducted at the participants' residences or the kidney care units as chosen by the participants. The interviews were not audiotaped because of cultural constraints and possible threats to clients which may have caused them to be hesitant to share information and experiences with the interviewer.

## Pilot Study

Upon review and approval of the study by the investigator's dissertation committee, the Departmental Review Board, and the Institutional Review Board at the University of Texas at Austin, a procedural pilot study was conducted with 10 subjects who had one of the following chronic illness; duodenal ulcer, mitral valve stenosis, hypothyroidism, congestive heart failure, migraine headache, chronic eczema, asthma, diabetes mellitus, and hypertension. Summary of the demographic characteristics of the pilot study subjects is presented in Table 3.2.

The purpose of the pilot study was to check the clarity of the Arabic translated versions of the study instruments and to determine the feasibility of the data collection procedures. Based on the findings obtained from the pilot

**Table 3.2**
**Demographic Characteristics of the Pilot Study Sample**

| Characteristics | N |
|---|---|
| **Sex** | |
| Male | 4 |
| Female | 6 |
| **Age** | |
| 25-30 | 1 |
| 31-40 | 5 |
| 41-50 | 3 |
| 51-60 | 1 |
| **Marital Status** | |
| Single | 2 |
| Married | 6 |
| Widowed | 2 |
| **Level of education** | |
| None | 2 |
| 1 to 6th grade | 2 |
| 7th to 9th grade | 1 |
| 10th to 12th grade | 2 |
| College degree | 2 |
| Graduate degree | 1 |
| **Employment status** | |
| Employed | 7 |
| Unemployed | 3 |

study, modification of the data collection procedures was done to suit the target population.

For both the PRQ 85 Part II and the JCS, subjects needed more clarification about the options on the Likert-type scale. Visual analog scales were used to clarify the degree of agreement or disagreement with each statement in the PRQ 85 Part II, and degree of satisfaction with social support resources. For the JCS, another visual analog scale with three points was used to clarify the frequency of the use of each coping method (Appendix D).

For each statement of the PRQ 85 Part II and the JSC, the majority of the respondents were not able to understand how to chose the option on the scales. For those statement, two questions were asked to help subjects choose the correct options on both scales.

In the PRQ Part II, for example, one of the statements is "There is someone I feel close to who makes me feel secure", two questions were asked: (a) Is there someone you feel close to who makes you feel secure?. Based on the first reply, the second question was (b) How much do you agree or disagree? during which the visual analog scale was presented to the subject. In the JCS, for example, one of the coping methods is "worried about the problem", two questions were asked: (a) Do you worry about the problem of being on hemodialysis?. If the answer is "yes", the second question was

(b) how often have you worried? during which the visual analog scale was presented to the subject. If the answer is "No", then the option "Never used" was marked.

## Instruments

The instruments used in this study include: (a) Social Support Resource measure, (b) Personal Resource Questionnaire (Weinert, 1987), (c) The modified version of Part A of the Jalowiec Coping Scale (Jalowiec, 1991), (c) Cantril's ladder(Cantril, 1965), and (d) Demographic Data Questionnaire. Description of the study instruments is presented below.

### Social Support Resource Measure

The Social Support Resource Measure is a single-item measure of availability of social support resources and degree of satisfaction with the help received. This measure was constructed for this study by the investigator, and was adapted from PRQ 85 Part I (Weinert, 1987).

### Personal Resource Questionnaire 85

The original Personal Resource Questionnaire (PRQ) was developed by Brandt and Weinert (1981). The original version of PRQ was slightly modified as the PRQ 82, which has been used extensively in various research projects. The latest version of this questionnaire is the PRQ 85. This version is a self-administered tool which requires approximately 15 minutes to complete.

The PRQ 85 is a two-part measure of the multidimensional characteristics of social support. Part 1 of the PRQ 85 consists of 10 life situations in which individuals might be expected to need some assistance and provides information regarding the person's resources and satisfaction with the help they received from the resources (situational support) (Weinert, 1987).

For this study, PRQ Part II was used. Part II is a 25-item, 7-point Likert-type scale that measures perceived levels of social support. Total scores range from 25-125 with higher scores indicating higher levels of perceived social support. This part was based on Weiss's (1969, 1974) model of relational functions of social support. The model consists of the following dimensions: (a) provision of attachment/intimacy; (b) social integration; (c) opportunity for nurturant behavior; (d) reassurance of worth; and (e) the availability of informational, emotional, and material help (Weinert, 1987).

Reliability of the Personal Resource Questionnaire 85 Part II. In a study of 149 male and female spouses of individuals with multiple sclerosis, Brandt and Weinert (1981) reported an internal consistency reliability coefficient (Cronbach's alpha) of .89 for the PRQ Part II. The reliability coefficients for the subscales were: intimacy .75; social integration .61; nurturance .77; worth .70; and assistance .75.

Weinert and Brandt (1987) conducted a study on 100 university alumni to assess the psychometric properties of the PRQ with test-retest reliability between perceived support at Time 1 and Time 2. The reliability coefficient was $\underline{r} = .72$, $\underline{p} < .001$ for perceived support. At Time 1, internal consistency for the total perceived support scale using Cronbach's alpha was .93. The reliability coefficients for the subscales were: .83 for intimacy, .83 for social integration; .83 for nurturance; .79 for the assistance; and .78 for the worth subscales. At Time 2, two weeks after Time 1, internal consistency for PRQ Part II using Cronbach's alpha, the reliability coefficient was .91. For the subscales, the reliability coefficients were: .88 for nurturance; .82 for intimacy; .80 for social integration; .79 for assistance; and .70 for worth subscales (Weinert and Brandt, 1987).

Validity of the Personal Resource Questionnaire 85 Part II. Content validity for the PRQ Part II was supported by the following strategies. First, three researchers in the area of social support critiqued the instrument for clarity of content and adequacy of the content domains. Second, fifteen graduate-prepared individuals in health or social science fields were asked to categorize the 25 items of the PRQ Part II into the dimensions of support intimacy, social integration, nurturance, worth, and assistance, and to delete the

inconsistently categorized items. Third, adults from the community completed the questionnaire and provided feedback about its relevance (Weinert, 1987)..

The predictive validity for the PRQ 85 Part II was assessed using two criteria available in the study of 149 adults, a measure of family functioning developed by Pless and Satterwhite (1973) and two subscales from Marital Adjustment Scale (Spanier, 1976) (dyadic satisfaction and dyadic consensus). The validity coefficients ranged from $\underline{r} = .30$ to .44 $p < .001$ (Weinert, 1984).

Criterion-related validity of the PRQ 85 Part II was established by correlating the scores of the PRQ 85 and the Cost and Reciprocity Index (CRI). The coefficient alpha for the PRQ 85 was .91 and for the CRI subscales: support .91, conflict .95, reciprocity .81, and cost .91 (Weinert & Tilden, 1990). These results were obtained from the Northwest Family Health Study (NFHS) (Weinert, 1988) and the Montana study (Gibson & Weinert, 1986).

Construct validity of the PRQ 85 was assessed by convergence and discriminant construct validity. Convergence validity was supported by the correlations between the PRQ 85 and the support subscale of the CRI. Correlations were: $\underline{r} = .58$ for NFHS and $\underline{r} = .53$ for the Montana study. Although the correlations were very low, they provided evidence that the PRQ 85 and the support subscale of the CRI were measuring the same construct. At

the same time, these correlations suggest that the two measures were not highly redundant.

Discriminant construct validity of the PRQ 85 was evaluated by comparing the PRQ 85 and CRI measure to theoretically relevant mental health concepts. The correlation of support as measured by the PRQ 85 with the total Profile Mood States (POMS) was $\underline{r} = -.31$, indicating support for the discriminant construct validity. The correlation of the support subscales of the CRI and the total POMS was $\underline{r} = -.13$ (Weinert & Tilden, 1990).

Factor analysis of the PRQ 82 revealed a three-factor structure. Factor analysis of the PRQ 85 was conducted due to the modification of the items of this version. A combined sample of 248 respondents from three data sets was used. These results indicate that the PRQ 85 and PRQ 82 both have three-factor structures.

Based on this analysis, the multidimensionality of the perceived social support construct can be captured by the following three factors: (a) intimacy/assistance, (b) nurturance, and (c) integration/affirmation . Correlations among the three factors were: (a) Factor I with Factor II, $\underline{r} = .19$, (b) Factor I with Factor III, $\underline{r} = .36$, and (c) Factor II with Factor III, $\underline{r} = .17$ (Weinert, 1987).

The Jalowiec Coping Scale

The Jalowiec Coping Scale (JCS) was originally developed in 1977 for the author's Master's thesis research and is based on Lazarus' conceptual framework (1966). The scale consists of 40-items that examine the frequency of the use of coping behaviors. Each item is rated on a 5-point scale. The original scale had two subscales: problem-oriented (15 items), and affective-oriented (25 items).

In 1987, the JCS was revised to include two parts, Part A, the use of coping methods, and Part B, the effectiveness of these coping methods. Based on this revision the following changes have been made in the new version of JCS: (a) the scale has been expanded to 60 items, (b) a 4-point (0-3) rating scale is now used instead of the previous 5-point scale to rate how often a respondent used each of the coping strategies, (c) a 4-point scale is now used to rate the effectiveness of each coping method used, and (d) a total of eight categories of coping styles were identified based on the author's and other researchers' work. These categories include confrontive, evasive, optimistic, fatalistic, emotive, palliative, supportant, and self-reliant coping (Jalowiec, 1991).

Confrontive coping refers to coping methods that are used to confront the situation, face up to the problem, and use constructive problem-solving. Evasive coping refers to the use of avoidant coping activities. Optimistic

coping refers to positive thinking, positive outlook, and positive comparisons. Fatalistic coping refers to pessimism, hopelessness, feeling of little control over the situation. Emotive coping refers to expressing and releasing emotions, and ventilating feelings. Palliative coping refers to trying to reduce or control distress by making the person feel better. Supportant coping refers to using personal, professional, and spiritual support systems. Self-reliant coping refers to depending on yourself rather than on others in dealing with the situation (Jalowiec, 1991).

Reliability of the Jalowiec Coping Scale. Jalowiec (1991) reported the psychometric results of 12 research studies which assessed the psychometric properties of the 1987 version of JCS. Homogeneity reliability of the total use and effectiveness scores ranged from .84 to .96. The stability reliability for the total use score was based on pre and post-operative data collected from cardiac transplant clients at three, six, nine, and 12 months. Retest correlations ranged between $\underline{r} = .57$ to $\underline{r} = .76$ for pre-operative data, and between $\underline{r} = .57$ to $\underline{r} = .71$ for post-operative data.

Validity of the Jalowiec Coping Scale. Content validity was supported by the systematic manner used in the development of the tool, the large number of items that capture the concept of coping, the inclusion of a wide range of

coping behaviors, and by the broad literature base and empirical base from which the items are drawn (Jalowiec, 1991).

Jalowiec (1991) reported the construct validity of the 1987 version of the JCS. A panel of 25 nurse researchers who were familiar with stress and coping literature were asked to classify each of the items on the scale into the eight subscales. Percent of agreement of the panel with the author's classification was: supportant 94%; confrontive 86%; evasive 85%; palliative 76%; optimistic 72%; fatalistic 67%; self-reliant 66%; and emotive 54%.

The main disagreement in classifying the items occurred on the following subscales: fatalistic versus emotive, fatalistic versus evasive, palliative versus evasive, palliative versus optimistic, and confrontive versus self-reliant. Items with the lowest agreement were: (a) did something impulsive or risky (emotive versus evasive), (b) tried to keep life as normal as possible (optimistic versus evasive), (c) blamed self for getting into the situation (emotive versus fatalistic), (d) tried to keep the situation under control (confrontive versus self-reliant), (e) tried to improve yourself in some way (self-reliant versus confrontive), and (f) told yourself that you were just having some bad luck (fatalistic versus evasive) (Jalowiec, 1991).

The Modified Version of the Part A of the JCS (Jalowiec, 1991)

For the purpose of this study, a modified version to the 1987 version of the Part A of the JCS (Appendix C) was used to examine the use of coping methods among adult Bahraini clients on maintenance hemodialysis. The procedure used to modify the scale was as follows: Part A of the 1987 version of the Jalowiec Coping Scale was given to four Bahraini health professionals, two graduate nursing students, a family physician, and the investigator. These raters were asked to rate each items of the scale based on the following criteria: (a) cultural appropriateness, (b) frequency of use, (c) categorization of the coping methods. Seventy-five percent agreement was required to place the item in one of the ratings appropriate for each criterion.

Analysis of the Results Obtained from the Four Raters

Three of the 60 items were considered culturally inappropriate. These items were: "took a drink to make yourself feel better", "did something impulsive or risky that you would not usually do"' and "took medications to reduce tension". Only one of the 60 items, although culturally appropriate, was rated as never used. This item was "used relaxation techniques". Twenty-nine items were rated as commonly used, while 11 items were rated as rarely used. Eleven items were rated, by at least two raters, as commonly used by Bahraini individuals.

Thirty items were categorized as emotion-oriented coping, 20 as problem oriented coping, three items were classified under others, and there were ties on seven of the items. Ties were resolved by a fifth rater. Categorization of the items after resolving the ties were: thirty-five items were categorized as emotion-oriented, 22 as problem-oriented, and three items were categorized under others (Appendix E).

Categorization of the items as problem-oriented or emotion-oriented coping behaviors depends solely on the investigator of the study (A. Jalowiec, Personal communication, March 28, 1995). By examining each item, separately, a decision is made about the categorization of that item. The modified version of Part A of the JCS used in this study included: deleting the three items rated by the raters as culturally inappropriate, and categorizing the scale as: problem-oriented, emotion-oriented, and other coping behaviors.

The raters identified additional methods Bahraini clients use to cope with the stress of chronic illness. Some of these methods were: visiting holy places, reading Quran, expressing stress as physical illness symptoms, withholding medical treatment, traveling, making promises to God, and visiting specific mosques.

Cantril's Ladder

The Cantril's ladder was developed by Cantril for cross-cultural study of people's aspirations and fears for self and country in 13 nations including Egypt. It stemmed from the researcher's interest in developing a method by which the concerns of individuals, articulated in their own terms, can be studied and compared with those of others. It is based on the theory of transactional psychology, which emphasizes the importance of understanding a person in his own terms rather than relying on fixed categories and assumptions (Cantril & Free, 1962). According to Cantril (1965) "this scale provides a simple and widely applicable, and adaptable technique for tapping the unique reality world of an individual and learning what it has in common with that of others" (p. 22).

The technique of this ladder is to ask a person to indicate two points between 0 and 10 of a ladder that identify the best and worst possible life he can imagine, respectively. Zero on the ladder represents the worst possible life for the respondent, and 10 represents the best possible life. These two questions may be adapted to elicit responses about the respondents' past and future possible lives. Scores obtained from the responses on the ladder are summated and averaged across the study sample.

Reliability of the Cantril's ladder. Traditional approaches to assess the psychometric properties of the Cantril's ladder, especially its reliability, are difficult to apply to the scale because of its high subjectivity. The ratings of one respondent do not bear relevance to another respondents' ratings. Moreover, since the identified points on the ladder reflect the respondent's personal opinion, the meaning of these points may remain constant for each respondent, thus minimizing the error variance (Cantril, 1965). Regardless of psychometric difficulties concerning the Cantril's ladder, some researchers have provided adequate support for its reliability and validity.

Campos and Johnson (1990) reported that the scale has been translated into 26 different languages. The estimated reliability coefficient obtained from cross-cultural research was .95. Over a period of two years, using a test-retest method, Palmore and Kivett (1977) reported a stability reliability of .65.

Validity of the Cantril's ladder. Cantril (1965) emphasized the value of the information obtained from the respondents in his international study as being honest, sincere, and plausible. Support for face validity was cited by Laborde and Powers (1980). They stated that "the face validity of the scale was supported by the overt relationship between the nature of the instrument and the phenomena under study, i.e., life satisfaction. Since the end points of the scale

are self-defined, the numerical ratings of aspirations are a reflection of self-defined criteria" (p. 21).

Content validity was established through data obtained from 3000 respondents worldwide. Based on content analysis of the data, a coding scheme was developed. The interrater reliability between the coders and between the coders and the investigators was 95%. Campos and Johnson (1990) concluded that the use of subjective measures of quality of life is a useful method to tap the cultural and personal values, feelings, and concerns of individuals.

Demographic Data Questionnaire

The demographic data questionnaire was developed by the investigator for this study. The questionnaire includes questions related to age, gender, marital status, number of children, level of education, employment status, presence of comorbid conditions, number of months on hemodialysis, and years since diagnosis with ESRD.

## Translation Procedure

Since data collection was done in an Arabic-speaking country, the English version of the instruments used in this study was translated into classical Arabic, via back-translation technique. The purpose of this technique was to check the instruments' accuracy for the purpose of data collection.

According to Brislin (1970) the back-translation technique involves the following: (a) two bilingual individuals are necessary to the translation; (b) one bilingual translates from the source (original version) to the target language; (c) the second bilingual blindly translates back from the target to the source; (d) the two completed versions, the original and the back-translated, are compared to determine if they are identical or equivalent, and the two translators arrive at a consensus with regard to the clarity of the translation; and (e) the source, target, and back-translated versions should prove to be equivalent. One of the criteria for achieving equivalence between the original and the back-translated version is to have a monolingual rater examine both versions. Brislin (1970) cited several research studies which reported successful use of the back-translation technique. MacDermott and Palchanes (1994) contended that the value of this translation technique is that the researcher can determine if the unexpected findings are due to errors in the translation or due to other confounding variables they might have contaminated the data.

For this study, the instruments were translated into classical Arabic in the following manner: (a) the investigator translated the English version into Arabic, (b) a bilingual rater from the Department of Middle Eastern Languages and Cultures at the University of Texas at Austin translated the Arabic version

back to English, (c) the two translators compared both versions to establish clarity and equivalence of the meaning, and (d) an English-only speaking (monolingual) rater was asked to examine the original and the back-translated version. Based on the pilot study using the Arabic version, the instruments were modified to suit the target population.

## Data Analysis Procedures

Quantitative data was analyzed using the Statistical Package for the Social Sciences for Windows 6.0. Descriptive statistics, including frequency statistics and measures of central tendency, were utilized to describe the demographic characteristics of the sample and the major variables of the study. The relationships among the variables were described and tested using correlation coefficients. Prior to regression analyses, multicollinearity diagnostic procedure were used to examine the predictor variables for possible multicollinearity, and a scatter plots of residuals were examined to confirm that the assumptions of linearity, normality, and homogeneity of variance were met.

Pearson-Product Moment Correlation was used to answer research questions 1, 2, and 3 regarding the relationships between social support variables (availability of social support resources, satisfaction with social support, and perceived level of social support) and the use of problem-oriented

and emotion-oriented coping. The significance of the relationships among the study variables was accepted at the $p < .05$ level of significance

Hierarchical multiple regression was used to examine the contribution of the predictor variables to the outcome variable in the analysis of the research questions 4, 5, and 6. The predictor variables were entered into the regression equation according to the theoretical justification based on the research model presented in Chapter 1.

Research questions 4 and 5 examine the indirect effects of social support on quality of life. A three-step hierarchical multiple regression analyses was used. For question 4, in step one social support variables (availability of social support resources, perceived satisfaction with support, and perceived level of support) were entered. In step two, emotion-oriented coping were entered. In step three, problem-oriented coping were entered.

For question 5, in step one social support variables (availability of social support resources, perceived satisfaction with support, and perceived level of support) were entered, in step two, problem-oriented coping was entered. In step three, emotion-oriented coping was entered.

Research question 6 examines the direct effect of social support in quality of life. A two-step hierarchical multiple regression analysis was used. In step one the use of coping methods was entered followed by the social

support variables (availability of social support resources, perceived satisfaction with support, and perceived level of support) in step two.

Additional analyses examined the contribution of demographic, illness and treatment-related variables. In the multiple regression analysis, a variable was considered to be a significant predictor if the addition of that variable significantly increased R square.

Question 7: What is the difference in the present quality of life ratings of adult Bahraini clients on hemodialysis and their retrospective ratings of quality of life prior to dialysis treatment? This question was answered using paired t-test. The significance of the difference was accepted at $p < .05$ level of significance.

Content analysis was used to analyze the qualitative data obtained to answer question 8: What are the critical domains of the quality of life outcomes identified by Bahraini adult clients on maintenance hemodialysis?

The investigator's written records of participants responses were reviewed. Responses of a similar nature were grouped into categories by the investigator. A graduate student (BSN-prepared Bahraini nurse) was asked to assign participants' responses to the categories developed by the investigator. The graduate student's categories were compared with the investigator's

categories to validate the process of content analysis of the qualitative data the categorized responses were translated from Arabic to English.

## Summary

In this chapter, the methodology for this study was described. This study was a descriptive correlational study. A convenience sample of subjects on maintenance hemodialysis were recruited from two Kidney Care Units in Bahrain. Prior to data collection, approval to conduct the study was obtained from the appropriate personnel involved in this study, the potential subjects received adequate explanation of the purpose of the study and method of participation in the study, and their privacy was protected throughout the study process.

A pilot study was conducted to evaluate the data collection procedure and to check the clarity of the Arabic version of the instruments. In this study the following variables were measured: (a) social support was measured by the Personal Resource Questionnaire 85 Part II (Weinert, 1987), and a single-item measure of availability of social support; (b) the coping methods were measured by the modified version of Part I of the Jalowiec Coping Scale (Jalowiec, 1987); (c) quality of life was measured by the Cantril's ladder (Cantril, 1965); and (d) demographic and health-related variables were measured by a questionnaire developed by the investigator for this study.

The above instruments were translated into classical Arabic using the back-translation technique described by Brislin (1970).

Data analysis procedures included the use of descriptive statistics, correlations, multiple regression, and t-test to analyze the quantitative data. The qualitative data were analyzed using content analysis. The significance of the relationships among the variables was accepted at $p < .05$ level.

# CHAPTER IV

## PRESENTATION OF FINDINGS AND ANALYSIS OF DATA

This chapter presents the results of data analysis. It includes five sections. The first section describes the demographic, illness-related, and treatment-related characteristics of the sample. The second section presents the preliminary analysis of data including reliabilities of the instruments, and correlations of major variables of the study. The third section focuses on the analysis of the data to answer the research questions. Section four presents additional findings generated from the analysis of the contribution of the demographic, illness-related, and treatment-related variables to the prediction of quality of life. Section five presents the analysis of qualitative data obtained.

### Description of the sample

Sixty subjects were recruited from two Kidney Care Units in Bahrain. Included in the study were clients who: (a) were 18 years or older, (b) able to speak Arabic, (c) were not currently being treated for any acute episode of chronic psychiatric illness, and (d) indicated their willingness to participate in the study. The demographic characteristics presented in Table 4.1 are summarized below.

## Table 4.1
## Summary of the Demographic Characteristics of the Sample

| Variable | N | Percent | Mean | S.D. | Minimum | Maximum |
|---|---|---|---|---|---|---|
| **Sex** | | | | | | |
| Male | 28 | 46.7% | | | | |
| Female | 32 | 53.3% | | | | |
| **Age** | | | 53.02 | 15.10 | 22 | 82 |
| 21-30 | 6 | 10.0% | | | | |
| 31-40 | 9 | 15.0% | | | | |
| 41-50 | 8 | 13.3% | | | | |
| 51-60 | 14 | 23.3% | | | | |
| 61-70 | 19 | 31.7% | | | | |
| 71-80 | 3 | 5.0% | | | | |
| 81-90 | 1 | 1.7% | | | | |
| **Marital Status** | | | | | | |
| Single | 8 | 13.3% | | | | |
| Married | 40 | 66.7% | | | | |
| Widowed | 11 | 18.3% | | | | |
| Divorced | 1 | 1.7% | | | | |

## Table 4.1
## Summary of the Demographic Characteristics of the Sample (continued)

| Variable | N | Percent | Mean | S.D. | Minimum | Maximum |
|---|---|---|---|---|---|---|
| **Number of Children** | | | 5.76 | 3.01 | 1 | 13 |
| 0-4 | 16 | 30.8% | | | | |
| 5-8 | 27 | 51.9% | | | | |
| 9-12 | 7 | 13.5% | | | | |
| 13-16 | 1 | 3.8% | | | | |
| **Age of Oldest Child** | | | 33.72 | 10.79 | 10 | 54 |
| 10-20 | 8 | 16.0% | | | | |
| 21-30 | 12 | 24.0% | | | | |
| 31-40 | 17 | 34.0% | | | | |
| 41-50 | 12 | 24.0% | | | | |
| 51-60 | 1 | 2.0% | | | | |
| **Age of Youngest Child** | | | 17.00 | 9.40 | 1 | 52 |
| 01-10 | 14 | 29.8% | | | | |
| 11-20 | 14 | 29.8% | | | | |
| 21-30 | 18 | 38.3% | | | | |
| 31-40 | 00 | 0% | | | | |
| 41-50 | 00 | 0% | | | | |
| 51-60 | 1 | 2.1% | | | | |

**Table 4.1**
**Summary of the Demographic Characteristics of the Sample (continued)**

| Variable | N | Percent | Mean | S.D. | Minimum | Maximum |
|---|---|---|---|---|---|---|
| **Level of Education** | | | 1.73 | 1.11 | 1 | 5 |
| None | 37 | 61.6% | | | | |
| 1- 6 grade | 12 | 20.0% | | | | |
| 7- 9 grade | 3 | 5.0% | | | | |
| 10-12 grade | 7 | 11.7% | | | | |
| College Graduate | 1 | 1.7% | | | | |
| **Employment status** | | | | | | |
| Employed | 11 | 18.3% | | | | |
| Unemployed | 49 | 81.2% | | | | |
| **Sources of Financial Support** | | | | | | |
| Retirement | 5 | 10.2% | | | | |
| Husband Support | 9 | 18.4% | | | | |
| Children Support | 25 | 51.0% | | | | |
| Social Security | 4 | 8.2% | | | | |
| Relatives | 5 | 10.2% | | | | |
| Savings | 1 | 2.0% | | | | |

The age range for the 60 subjects was 22 to 82 with a mean of 53.02 years. Of the total sample, 28 (46.7%) were males and 32 (53.3%) were females. The majority of the subjects (66.7%) were married. There were eight (13.3%) single subjects, eleven (18.3%) subjects were widowed, and one subject was divorced. Of the 50 subjects with children, the mean number of children was 5.76. Of the subjects who did not have children, eight were single, one divorced, and one widowed.

Of the total sample, 37 (61.6%) subjects had never attended school. Twenty-two (36.7%) subjects had less than a high school education, and only one subject (1.7%) had a college degree. Only eleven (18.3%) subjects were working at either a full-time government job or part-time private business while 49 (81.7%) were not employed. Of the total unemployed subjects, 29 were females and only three females indicated being employed. Of the total unemployed subjects, 51% were financially supported by their children, and 18.4% were financially supported by their spouses.

The number of months since dialysis was first started, for this sample, ranged from one to 144 months, with a mean of 30.06 months. Of the total sample, 18 subjects (30%) reported being on hemodialysis for 6 months or less, and 16 subjects (26.7%) had been on hemodialysis between 7 to 12 months.

Twenty-four of the subjects (40%) had been on hemodialysis for more than 18 months.

Forty-two subjects (70%) reported the presence of comorbid conditions in addition to ESRD. Specifically, 13 subjects (31%) reported having hypertension, 22 subjects (52.4%) reported having hypertension along with other chronic conditions, and 20 subjects (47.6%) reported having other chronic conditions without hypertension.

The number of comorbid conditions ranged from one to three chronic conditions with a mean of 1.4. Twenty-eight subjects (66.7%) reported having one comorbid condition, and 10 subjects (23.8%) reported having two comorbid conditions. Only 4 subjects (9.5%) reported having three comorbid conditions in addition to ESRD. Illness and treatment-related variables are summarized in Table 4.2.

## Table 4.2
## Summary of Illness and Treatment-Related Variables

| Variable | N | Percent | Mean | S.D. | Minimum | Maximum |
|---|---|---|---|---|---|---|
| **Months on Dialysis** | | | 30.06 | 34.69 | 1 | 144 |
| 1- 6 months | 18 | 30.0% | | | | |
| 7-12 months | 16 | 26.7% | | | | |
| 13-18 months | 2 | 3.3% | | | | |
| More than 18 months | 24 | 40.0% | | | | |
| **Presence of Comorbid Conditions** | 42 | 70.0% | | | | |
| **No. of Comorbid Conditions** | | | | | | |
| 1 Comorbid Condition | 28 | 66.7% | | | | |
| 2 Comorbid Conditions | 10 | 23.8% | | | | |
| 3 Comorbid Conditions | 4 | 9.5% | | | | |
| **Comorbid Conditions** | | | | | | |
| Hypertension | 13 | 31.0% | | | | |
| Hypertension and other Chronic Conditions | 22 | 52.4% | | | | |
| Other Chronic Conditions Without Hypertension | 20 | 47.6% | | | | |

## Table 4.2
## Summary of Illness and Treatment-Related Variables (Continued)

| Variable | N | Percent | Mean | S.D. | Minimum | Maximum |
|---|---|---|---|---|---|---|
| **Years Since Diagnosed with ESRD** | | | 3.55 | 3.77 | 1 | 20 |
| Less than One Year | 11 | 18.3% | | | | |
| 1-5 | 35 | 58.3% | | | | |
| 6-10 | 11 | 18.3% | | | | |
| 11-15 | 2 | 3.4% | | | | |
| 15-20 | 1 | 1.7% | | | | |

## Preliminary Analysis of Data

This section will present the preliminary analysis of quantitative data. The preliminary analysis included descriptive data and results of reliabilities of the scales used in this study and correlations among the major variables of the study.

### Description of the Study Instruments

Descriptive data of the Personal Resource Questionnaire (PRQ) Part II, Modified version of part A of the Jalowiec Coping Scales and its subscales are presented in table 4.3. Descriptive data include possible score range, score range for this study, mean, and standard deviation. Descriptive data of the single-item of social support measure is also presented.

Single-item social support measure. In the single-item social support measure, subjects indicated the availability of social support resources and the satisfaction with their social support resources. Availability of social support resources was measured by the number of resources available for help. Four (6.7%) subjects had no social support resources available for help when needed. Twenty-one (35%) subjects had two social support resources. Thirty-five (58.3%) subjects had at least one social support resource available for help when needed.

**Table 4.3**
**Summary of Descriptive Data of Study Instruments**

| Instrument | Possible Score Range | Range | Mean | S.D. |
|---|---|---|---|---|
| PRQ Part II (25 Items) | 25-175 (Responses= 1-7) | 73-175 | 126.45 | 16.60 |
| Total JCS (46 Items) | 0-138 (Responses= 0-3) | 30-96 | 46.23 | 12.46 |
| Confrontive Coping Subscale (10 Items) | 0-30 (Responses= 0-3) | 0-25 | 6.93 | 7.34 |
| Evasive Coping Subscale (7 Items) | 0-21 (Responses= 0-3) | 0-15 | 7.35 | 3.63 |
| Optimistic Coping Subscale (6 Items) | 0-18 (Reponses= 0-3) | 0-17 | 6.15 | 3.76 |
| Fatalistic Coping Subscale (3 Items) | 0-9 (Reponses= 0-3) | 0-9 | 4.62 | 2.42 |
| Palliative Coping Subscale (5 Items) | 0-15 (Responses= 0-3) | 0-10 | 2.90 | 2.81 |

**Table 4.3**
**Summary of Descriptive Data of Study Instruments (Continued)**

| Instrument | Possible Score Range | Range | Mean | S.D. |
|---|---|---|---|---|
| Emotive Coping Subscale (3 Items) | 0-9 (Responses= 0-3) | 0-8 | 4.25 | 1.98 |
| Supportant Coping Subscale (5 Items) | 0-15 (Responses= 0-3) | 0-13 | 9.12 | 5.90 |
| Self-reliant Coping Subscale (7 Items) | 0-21 Responses= 0-3) | 0-15 | 4.92 | 3.48 |

Over half of the subjects (55%) turned to their children for help. Eighteen (30%) subjects turned to their husbands or wives for help, 15 (25%) turned to relatives for help, and only three (5%) subjects turned to their parents for help.

Thirty-seven (61.7%) subjects indicated that they were "very satisfied", 19 (31.7%) were "fairly satisfied", and three (5%) subjects were "little satisfied" with the help they received from their social support resources. Only one (1.7%) was "little dissatisfied" with the help received from his/her social support resources.

PRQ Part II. The total scores ranged from 73-175 ($M$ = 126.45, $SD$ = 16.60). The highest possible score was 175.

Modified Version of Jalowiec Coping Scale. For the modified version of Part A of the JCS, the total scores ranged from 30-96 ($M$ = 46.23, $SD$ = 12.46). The highest possible score was 138. Summary of coping methods reported by subjects as being often used, and seldom used are presented in Appendix J.

The most frequently used coping methods were "prayed or put trust in God" which was reported by 51 (85%) subjects, followed by "worried about the problem" which was reported by 24 (40%) subjects. "Talked the problem over with family or friends" was reported by 20 (33.3%) subjects as being most frequently used coping methods.

The least frequently used coping methods were "depended on other to help you out" which was reported by 38 (63.3%) subjects, "tried to see the good side of the situation" by 29 (48.3%) subjects, and "put off facing the problem" by 27 (45%) subjects. Only one item was reported by 56 (93.3%) subjects as being "never used". This item was "smoked and ate more than usual".

Reliability Analysis of the Study Instruments

The Cronbach's alpha reliabilities for the Modified version of Part A of the Jalowiec Coping Scale, the problem-oriented coping subscale, and emotion-oriented coping subscale, and the Personal Resource Questionnaire Part II for this study are shown in Table 4.4. The alpha coefficients for three of the four study instruments were above the acceptable .70 level (Polit & Hungler, 1993) . However, the emotion-oriented coping subscale had an alpha coefficient of .40.

According to Woods and Catanzaro (1988), reliability of a measurement instrument is influenced by random error which is related to temporary conditions in the individual, study context, or instrument administration. Temporary conditions related to the individual can be explained either by response set bias such as socially desirable responses, or by transitory factors such as changes in attention span, mood, or health status.

**Table 4.4**
**Reliability Coefficients of the Study Instruments (N=60)**

| Instrument | No. of items | Alpha Coefficient |
|---|---|---|
| Jalowiec Coping Scale | 57 | .80 |
| Problem-oriented coping subscale | 22 | .92 |
| Emotion-oriented coping subscale | 32 | .40 |
| Personal Resource Questionnaire Part II | 25 | .88 |

Temporary conditions related to study context can be explained by the subject being aware that the responses are not private such as having another person present while the subject was being interviewed. Temporary conditions related to the instrument can be explained by lack of understanding of the items. Respondents may interpret the items differently than the researcher.

Polit and Hungler (1991) provided another explanation for obtaining a low reliability of a measurement instrument. The authors stated that the homogeneity of the sample makes the instrument unreliable in terms of discriminating among those who have varying degrees of the variable being measured.

In this sample, the low reliability coefficient (alpha coefficient = .40) of the emotion-oriented coping items may be due to several reasons. First, the homogeneity of the sample with respect to the use of emotion-oriented coping methods, medical diagnosis, type of treatment, level of education, religion, and culture may have decreased the discriminatory power of the scale. Second, there may have been lack of consensus between the respondents and the investigator's interpretation of some of the items. Third, it may have been difficult for subjects with little or no formal education to interpret the abstract emotion-oriented coping items (e.g. tried to get out of the situation).

The reliability of the emotion-oriented coping subscale was unacceptably low and, therefore could not be used in further analysis in its present form. To improve the reliability of this subscale, the following strategies were implemented. First, the Jalowiec Coping Scale was classified into its original eight subscales and the alpha reliability for each subscale was computed. Table 4.5 presents the alpha reliabilities for each of the subscales.

Second, several items were deleted from subscales with alpha reliabilities below .70. Deletion of the items was based on one of the following two criteria: (a) if the item had a negative correlation with the subscale score, and (b) if the item had a correlation of $\underline{r} = .15$ or below with the subscale. Based on the above criteria, eleven items were deleted (Appendix F). Alpha reliabilities of the eight subscales after items deletion ranged from .55 to .93 (Table 4.6).

Nine of the deleted items were previously classified as emotion-oriented items. Six items were deleted from evasive coping subscale, three from optimistic, one from fatalistic, and one from emotive coping subscale.

The deleted items tended to be: (a) inappropriate for the physical health status of the hemodialysis clients, such as "slept more than usual," since these clients often complain of insomnia; and (b) religiously unacceptable such as "blamed yourself for getting into the situation". In addition, the majority of the

**Table 4.5**
**Reliability coefficients of the subscales of the Jalowiec Coping Scale (N=60)**

| Subscale | No. of items | Alpha Coefficient |
|---|---|---|
| Confrontive | 10 | .93 |
| Self-reliant | 7 | .70 |
| Palliative | 5 | .68 |
| Optimistic | 9 | .64 |
| Emotive | 4 | .59 |
| Supportant | 5 | .55 |
| Fatalistic | 4 | .53 |
| Evasive | 13 | .47 |
| Total Jalowiec Coping Scale | 57 | .80 |

**Table 4.6**
**Alpha Reliabilities of the subscales after item deletions (N= 60)**

| Instruments | No. of items | Alpha Coefficients |
|---|---|---|
| Confrontive | 10 | .93 |
| Self-reliant | 7 | .70 |
| Palliative | 5 | .68 |
| Optimistic | 6 | .79 |
| Emotive | 3 | .66 |
| Supportant | 5 | .55 |
| Fatalistic | 3 | .71 |
| Evasive | 7 | .71 |
| Total Jalowiec Coping Scale | 46 | .79 |

items deleted tended to be of high level of abstractness compared to the respondents' level of education, 37 (61.6%) of the subjects were not able to read or write. Examples of such items were "tried to get out of the situation." and "daydreamed about a better life."

Correlations Among Variables of the Study

Pearson Product Moment Correlations were used to examine the relationships among demographic, illness and treatment-related variables, and major variables of the study (Appendix G). Categorical variables were dummy coded; (a) sex: male = 1, female = 0, (b) marital status: married = 1, not married = 0, and (c) source of financial support: supported by relatives =1, other support =0.

Correlations among demographic variables showed that in general, older age was associated with being married ($r = .60$, $p < .001$), and having lower educational level ($r = -.60$, $p < .001$). Male gender was associated with having fewer dependents ($r = -.39$, $p < .01$), and having less support from relatives ($r = -.32$, $p < .05$) . Being married was associated with lower educational level ($r = -.55$, $p < .001$).

There was a weak positive association between the number of comorbid conditions and number of years since being diagnosed with ESRD. However, this association was not statistically significant ($r = .29$, $p < .06$).

Correlations among demographic variables and illness and treatment-related variables showed that in general, older age was associated with comorbidity ($r = .28$, $p < .05$), and increased number of comorbid conditions ($r = .30$, $p < .05$). Comorbidity of subjects was associated with subjects being married ( $r = .28$, $p < .05$), and being unemployed ($r = -.25$, $P < .05$).

Pearson Product Moment Correlations were used to examine the relationships among demographic variables and the major variables of the study. Several relationships were found. Older age was associated with less use of confrontive coping ($r = -.44$, $p < .001$), and use of fatalistic coping ($r = .27$, $p < .05$). Of the demographic variables, only marital status was associated with quality of life. Married subjects reported lower quality of life ($r = -.32$, $p < .05$) than unmarried subjects. Higher educational level was significantly correlated with subjects having fewer number of social support resources ($r = -.27$, $p < .05$), the use of the total coping methods ($r = .50$, $p < .001$), the use of confrontive coping ($r = .70$, $p < .001$), palliative coping ($r = .26$, $p < .05$), and self-reliant coping ($r = .36$, $p < .01$). Educational level was negatively correlated with the use of fatalistic coping ($r = -.33$, $p < .01$).

In examining the correlations among illness and treatment-related variables and major variables of the study, the only significant relationship found was between number of comorbid conditions and perceived social

support. Subjects with increased number of comorbid conditions perceived lower levels of social support than those with fewer number of comorbid conditions ($r = -.31$, $p < .05$).

In examining correlations among predictor and criterion variables of the study several relationships were found (Table 4.7). Since the relationships among the predictor and criterion variables have not been explored among adult Bahraini clients on maintenance hemodialysis, a two-tailed level of significance ($p < .05$) was used to test the significance of the relationships. Availability of social support resources was associated with the use of supportant coping ($r = .50$, $p < .001$), and less use of self-reliant coping ($r = -.34$, $p < .01$). Satisfaction with social support resources was associated with perceived social support ($r = .42$, $p < .001$).

Perceived social support was associated with the use of the majority of the coping styles, and total coping scores ($r = .38$, $p < .01$). Of the predictor variables, only perceived social support was associated with higher ratings of present quality of life ($r = .30$, $p < .05$) among adult Bahraini clients on maintenance hemodialysis.

## Table 4.7
## Correlations among Predictor and Criterion Variables of the Study

| | Predictor Variables | | | | | | | | | | | Criterion Variables | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| **1** | .04 | .18 | -.07 | .00 | -.19 | .03 | .05 | -.18 | -.04 | .50*** | -.34** | .18 | -.04 |
| **2** | | .42** | .03 | .02 | -.11 | .14 | -.29* | -.10 | .10 | .27* | .01 | .15 | .15 |
| **3** | | | .38** | .34** | -.44*** | .63*** | -.57*** | -.32* | .53*** | .51*** | .20 | .02 | .30* |
| **4** | | | | .75*** | -.09 | .76*** | -.11 | -.14 | .75*** | .17 | .71*** | .12 | .07 |
| **5** | | | | | .51*** | .44*** | -.42** | -.03 | .45*** | .14 | .47*** | .22 | -.03 |
| **6** | | | | | | -.19 | .53*** | .00 | -.10 | .41*** | -.09 | -.14 | .10 |

Two-tailed significance: * p <.05, **p <.01, ***p <.001

1= availability of social support resources
2= satisfaction with social support resources
3= perceived social support
4= total coping methods
5= confrontive coping
6= evasive coping
7= optimistic coping
8= fatalistic coping
9 = emotive coping
10= palliative coping
11= supportant coping
12= self-reliant coping
13= quality of life before dialysis
14= present quality of life

## Table 4.7
## Correlations among Predictor and Criterion Variables of the Study (Continued)

| | Predictor Variables | | | | | | | | | | | Criterion Variables | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 7 | | | | | | | -.23 | -.44*** | .73*** | .31* | .51*** | .04 | .29* |
| 8 | | | | | | | | .11 | -.32* | -.20 | -.18 | -.16 | -.05 |
| 9 | | | | | | | | | -.40** | -.06 | -.23 | .14 | -.55*** |

Two-tailed significance: * p <.05, **p <.01, ***p <.001

1= availability of social support resources
2= satisfaction with social support resources
3= perceived social support
4= total coping methods
5= confrontive coping
6= evasive coping
7= optimistic coping
8= fatalistic coping
9 = emotive coping
10= palliative coping
11= supportant coping
12= self-reliant coping
13= quality of life before dialysis
14= present quality of life

## Table 4.7
## Correlations among Predictor and Criterion Variables of the Study (Continued)

| | Predictor Variables | | | | | | | | | | Criterion Variables | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| **10** | | | | | | | | | | .12 | .62*** | .06 | .28* |
| **11** | | | | | | | | | | | -.23 | .03 | .11 |
| **12** | | | | | | | | | | | | .11 | .03 |
| **13** | | | | | | | | | | | | | -.53*** |

Two-tailed significance: * p <.05, **p <.01, ***p <.001

1= availability of social support resources
2= satisfaction with social support resources
3= perceived social support
4= total coping methods
5= confrontive coping
6= evasive coping
7= optimistic coping
8= fatalistic coping
9 = emotive coping
10= palliative coping
11= supportant coping
12= self-reliant coping
13= quality of life before dialysis
14= present quality of life

## Analysis of the Research Questions

This section presents data analysis of research questions. The data analysis procedures used were Pearson Product Moment correlations, hierarchical multiple regression, paired t-tests, and content analysis. The alpha level was $p < .05$.

Pearson Product Moment Correlations were conducted to analyze questions one through three. Table 4.8 presents the findings of the analysis.

Due to the low reliability of the combined emotion-oriented items, these items were examined as seven separate subscales. The seven subscales include self-reliant, palliative, optimistic, emotive, supportant, fatalistic, and evasive coping subscales. Therefore, analysis of the research questions was based on the seven subscales that constitute the combined emotion-oriented items. Since all the confrontive coping items were classified, in this study, as problem-oriented coping items, confrontive coping subscale was equated with problem-oriented coping subscale.

## Table 4.8
## Correlations among social support variables and the use of coping methods

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| **Availability of social support resources** | .00 | -.19 | .03 | .05 | -.18 | -.04 | .50*** | -.34** | -.07 |
| **Satisfaction with social support resources** | .02 | -.11 | .14 | -.29* | -.10 | .10 | .27* | .01 | .03 |
| **Perceived social support** | .34** | -.44*** | .63*** | -.56*** | -.32* | .53*** | .51*** | .20 | .38*** |

Two-tailed significance: * p <.05, **p <.01, ***p <.001

1= confrontive coping
2= evasive coping
3=optimistic coping
4= fatalistic coping
5= emotive coping
6= palliative coping
7= supportant coping
8= self-reliant coping
9= total coping methods

Question 1

What is the relationship between availability of social support resources/presence of a confidant and the use of problem-oriented and emotion-oriented coping methods?.

The availability of social support resources/presence of a confidant was not significantly related to the use of problem-oriented (confrontive) coping methods. The availability of social support resources/presence of a confidant was associated with greater use of supportant coping methods ($r$ =.50, $p$ <. 001), and less frequent use of self-reliant coping methods ($r$ = -.34, $p$ < .01).

Question 2

What is the relationship between the perceived satisfaction with social support resources and the use of problem-oriented and emotion-oriented coping methods?.

Correlation coefficients between satisfaction with social support resources and the use of problem-oriented coping methods showed no significant relationship. However, there were significant relationships between satisfaction with social support resources and the use of two styles of emotion-oriented coping methods: (a) the use of supportant coping ($r$ = .27, $p$ <. 05), and (b) less use of fatalistic coping ($r$ = -.29, $p$ < .05).

Question 3

What is the relationship between perceived social support and the use of problem-oriented and emotion oriented coping methods?.

Perceived social support was significantly associated with the use of confrontive coping (problem-oriented). The correlation coefficient was $r = .34$, $p < .01$. Several relationships were found between perceived social support and emotion-oriented coping methods. There were significant positive relationships between perceived social support and the use of optimistic coping ($r = .63$, $p < .001$), palliative coping ($r = .53$, $p < .001$), and supportant coping ($r = .51$, $p < .001$). Negative relationships existed between perceived social support and evasive coping ($r = -.44$, $p < .001$), fatalistic coping ($r = -.56$, $p < .001$), and emotive coping ($r = -.32$, $p < .05$).

Assessment of Multicollinearity and Selection of Predictor Variables for Regression Equations

Research questions four through six were answered using hierarchical multiple regression analyses. Scatterplots of residuals were examined to confirm that the assumptions of normality, homoscedasticity, and linearity had been met.

Assessment of multicollinearity among predictor variables was assessed by examining the tolerance value of each predictor and variance inflation factor (VIF) using Statistical Package for the Social Sciences (SPSS) (1993). Tolerance is defined as "the proportion of variability of that is not explained by its linear relationships with the other independent variables in the model" (Norusis, 1995, p.484). Tolerance values can range from 0.00 (perfect multicollinearity) to 1.00 (no multicollinearity). Tolerance values in the regression equations for questions four through six range from .353 to .941. Multicollinearity exists if a predictor variable has a tolerance of 0.1 or less (Norusis, 1995).

Variance inflation factor (VIF) is defined as the reciprocal of the tolerance. A VIF of 10 or more indicates multicollinearity among predictor variables (Stevens, 1992). For this sample, variance inflation factors for predictor variables in the regression equations were below 3.00, indicating no multicollinearity among the predictor variables.

Due to the small sample size, the seven emotion-oriented subscales could not all be entered in the regression analysis. Therefore, the selection of the emotion oriented subscales for predictor variables in the regression equations in this exploratory study was based on two criteria: the subscale was significantly related to the dependent variable, and the strength of support in the literature

for the subscale as a predictor variable of health outcome or adjustment to chronic illness.

Among the emotion-oriented coping methods, emotive, palliative, and optimistic coping subscales were correlated with clients ratings of quality of life. The correlations were $\underline{r} = -.55$, $\underline{p} < .01$; $\underline{r} = .28$, $\underline{p} < .05$; and $\underline{r} = .29$, $\underline{p} < .05$, respectively.

The use of emotive, palliative, and optimistic coping and their relationships to health outcomes and adjustment to chronic illness were supported by theoretical and empirical literature (Felton, Revenson, & Hirrichsen (1984); Kuiper & Nyamathi (1991); Jalowiec, 1993; Lazarus & Folkman, 1984). Therefore, in this exploratory study, emotive, palliative, and optimistic coping subscales represented the emotion-coping methods. The confrontive coping subscale represented the problem-oriented coping methods.

Felton, Revenson, and Hirrichsen (1984) examined the coping strategies among chronically ill clients. Results showed that emotive coping strategies were related to poorer adjustment to illness.

Kuiper and Nyamathi (1991) examined the stressors and coping strategies used by patients living with an automatic implanted cardioverter defibrillator. Results showed that optimistic coping styles had the highest

scores, while emotive coping had the lowest scores among the eight coping subscales.

Palliative coping methods have been cited in the literature as effective ways of coping. These coping methods are specially helpful when active ways of coping can not be done to deal with the stressful situation (Jalowiec, 1993). The use of such coping methods may facilitate the use of problem-oriented coping methods, when an individual is confronted with a high level of stress that interferes with the use of constructive and active methods to deal directly with the stressful situation (Lazarus & Folkman, 1984).

There is a general agreement in the literature regarding the relationships among social support, coping methods, and quality of life in chronically ill clients. Lazarus and Folkman (1984) concluded that people will adapt effectively if they receive or perceive adequate social support that facilitates their coping process.

Research questions four through six focused on two possible explanations about the contribution of social support to quality of life and general well-being. First, social support may buffer stress, in which it protects individuals from the negative effects of stress and enhances their coping abilities, therefore, improving quality of life. Second, social support may have direct positive effect on health and general well-being.

Based on Lazarus and Folkman's (1984) stress and coping theory, coping has two functions: (a) managing or changing the problem causing stress (problem-oriented coping), and (b) regulating emotional responses related to the problem (emotion-oriented coping). They also stated that individuals use a combination of both types to cope with illness-related stressors.

The focus of this exploratory study was to investigate the relationships among social support, coping methods, and quality of life in adult Bahraini clients on hemodialysis. These relationships have been explored and cited in the nursing, and social and behavioral sciences in western countries and with clients with different diagnoses. However, no studies explored these relationships in Bahraini clients. Questions four through six, specifically, investigate the contribution of problem-oriented coping, emotion-oriented coping, and social support to the prediction of quality of life

Question 4

Does the use of problem-oriented coping methods add significantly to the prediction of quality of life after the effects of social support variables and the use of emotion-oriented coping have been accounted for?

A three-step hierarchical multiple regression was used to answer question four (Table 4.9). With present quality of life as the criterion variable, social support variables (availability of social support resources, satisfaction

**Table 4.9**
**Hierarchical Multiple Regression Analysis of Social Support Variables, Emotion-oriented coping, and Problem-oriented coping on Quality of Life (N= 60)**

| Predictor Variables | Multiple R | R Sq | Adj R Sq | F | Sig F | R Sq | F Ch | Sig F Ch | Beta |
|---|---|---|---|---|---|---|---|---|---|
| **Social Support Variables:** | | | | | | | | | |
| -perceived Social Support. | | | | | | | | | .20 |
| -Availability of Social Support Resources. | | | | | | | | | -.17 |
| -Satisfaction with Social Support Resources. | .32 | .10 | .05 | 2.10 | .11 | .10 | 2.10 | .11 | .02 |
| **Emotion-oriented Coping** | | | | | | | | | |
| -Emotive | | | | | | | | | -.52 |
| -Palliative | | | | | | | | | .04 |
| -Optimistic | .59 | .35 | .28 | 4.75 | .001 | .25 | 6.76 | .001 | -.04 |
| **Problem-oriented Coping** | | | | | | | | | |
| -Confrontive | .60 | .36 | .27 | 4.17 | .001 | .01 | .76 | .39 | -.11 |

**Adjusted R Square = .27 (Overall F = 4.17, p <.001, df = 7, 52)**

with social support resources, and perceived social support) were entered in step 1, emotion-oriented (emotive, palliative, and optimistic) coping methods were entered in step 2, and problem-oriented (confrontive) coping methods was entered in step 3.

A multiple R of .32 ($F = 2.10$, $p < .11$) was obtained when social support variables were entered in step 1. A multiple R of .59, (F change = 6.76, $p < .001$) was obtained when emotion-oriented coping methods were entered in step 2. A multiple R of .60 (F change = .76, $p < .39$) were obtained when problem-oriented coping methods was entered in step 3. The overall F for the final regression equation was $F = 4.17$, $p < .001$, $df = 7, 52$. The adjusted R Square was .27.

Social support variables accounted for 10% ($p > .05$) of the variance in present quality of life. Emotion-oriented coping added 25% ($p < .001$) to the variance in present quality of life after the effect of social support variables had been accounted for. Problem-oriented coping added 1% ($p > .05$) to the variance in present quality of life after the effect of social support variables and emotion-oriented coping have been accounted for. The overall model including social support variables, emotion-oriented coping, and problem-oriented coping accounted for 27% of the variance in present quality of life.

The use of problem-oriented coping methods (confrontive) did not add significantly to the prediction of quality of life after the effects of social support variables (availability of social support resources/presence of a confidant, satisfaction with social support resources, and perceived social support), and the use of emotion-oriented coping methods (emotive, palliative, and optimistic coping) had been statistically controlled.

Question 5

Does the use of emotion-oriented coping methods add significantly to the prediction of quality of life after the effects of social support variables and the use of problem-oriented coping method have been accounted for?.

A three-step hierarchical multiple regression was used to answer question five (Table 4.10). With present quality of life as the criterion variable, social support variables (availability of social support resources, satisfaction with social support resources, and perceived social support) were entered in step 1, problem-oriented (confrontive) coping methods were entered in step 2, and emotion-oriented (emotive, palliative, and optimistic) coping methods were entered in step 3.

A multiple R of .32 ($F = 2.10$, $p < .11$) was obtained when social support variables were entered in step 1. A multiple R of .35 (F change = 1.33, $p < .25$) was obtained when problem-oriented coping was entered in step 2.

## Table 4.10
## Hierarchical Multiple Regression Analysis of Social Support Variables, Problem-oriented coping, and Emotion-oriented coping on Quality of Life (N= 60)

| Predictor Variables | Multiple R | R Sq | Adj R Sq | F | Sig F | R Sq | F Ch | Sig F Ch | Beta |
|---|---|---|---|---|---|---|---|---|---|
| **Social Support Variables:** | | | | | | | | | |
| -Perceived Social Support. | | | | | | | | | .20 |
| -Availability of Social Support Resources. | | | | | | | | | -.17 |
| -Satisfaction with Social Support Resources. | .32 | .10 | .05 | 2.10 | .11 | .10 | 2.10 | .11 | .02 |
| **Problem-oriented Coping** | | | | | | | | | |
| -Confrontive coping | .35 | .12 | .06 | 1.92 | .12 | .02 | 1.33 | .25 | -.11 |
| **Emotion-oriented Coping** | | | | | | | | | |
| -Emotive coping | | | | | | | | | -.52 |
| -Palliative coping | | | | | | | | | .04 |
| -Optimistic coping | .60 | .36 | .27 | 4.17 | .001 | .24 | 6.41 | .001 | -.04 |

**Adjusted R Square = .27 (Overall F = 4.17, p <.001, df = 7, 52)**

A multiple R of .60, (F change = 6.41, p <.001) was obtained when emotion-oriented coping was entered in step 3. The overall F for the final regression equation was F = 4.17, p <.001, df = 7, 52. The adjusted R Square was .27.

Social support variables accounted for 10% (p >.05) of the variance in present quality of life. Problem-oriented coping added 2% (p <.05) to the variance in present quality of life after the effect of social support variables had been accounted for. Emotion-oriented coping added 24% (p <.001) to the variance in quality of life after the effects of social support variables, and problem-oriented coping had been accounted for. The overall model including social support variables, emotion-oriented coping, and problem-oriented coping accounted for 27% of the variance in present quality of life.

Therefore, the use of emotion-oriented coping methods (emotive, palliative, and optimistic) contributed significantly to the prediction of quality of life after the social support variables (availability of social support, satisfaction with social support resources, perceived social support, and problem-oriented coping methods (confrontive coping) had been statistically controlled.

Question 6

Does social support add significantly to the prediction of quality of life after the effects of the use of coping methods have been accounted for?.

A two-step hierarchical multiple regression analysis was used to answer this question investigating the contribution of social support on quality of life (Table 4.11). With present quality of life as the criterion variable, the total coping methods (emotion-oriented, and problem-oriented) was entered in step 1, and social support variables (availability of social support resources, satisfaction with social support resources, and perceived social support) were entered in step 2.

A multiple R of .07 ($F$ =.30, $p$ <.58) was obtained when total coping methods was entered in step 1. A multiple $R$ of .32 ($F$ =1.6, $p$ <.19) when social support variables were entered in step 2. The Adjusted $R$ Square was .04. The overall F for the final regression equation was $F$ = 1.60, $p$ <.19, $df$ = 4,55.

Total coping methods accounted for 1% of the variance in quality of life after the effect of coping had been accounted for. The overall model explained 4% of the variance in present quality of life. Therefore, social support variables did not add significantly to the prediction of present quality of life after the

**Table 4.11**
**Hierarchical Multiple Regression Analysis of Social Support Variables, and coping methods, on Quality of Life (N= 60)**

| Predictor Variables | Multiple R | R Sq | Adj R Sq | F | Sig F | R Sq | F Ch | Sig F Ch | Beta |
|---|---|---|---|---|---|---|---|---|---|
| **Total Coping Methods** | .07 | .01 | -.01 | .30 | .58 | .01 | .30 | .58 | -.06 |
| **Social Support Variables** | | | | | | | | | |
| **- Availability of Social Support Resources.** | | | | | | | | | -.11 |
| **- Satisfaction with Social Support Resources.** | | | | | | | | | .01 |
| **- Perceived Social support** | .32 | .10 | .04 | 1.60 | .19 | .10 | 2.03 | .12 | .34 |

**Adjusted R Square = .04 (Overall F = 1.60, p<. 19, df = 4, 55)**

effect of total coping methods had been statistically controlled and the 2-step model did not explain significant variance in quality of life.

Question 7

What is the difference in the present quality of life ratings and the retrospective ratings of quality of life prior to hemodialysis treatment?

A paired t-test with a two-tailed level of significance was conducted to analyze the difference in quality of life ratings before hemodialysis was first started and present quality of life. Results showed that there was a significant difference between subjects' ratings before hemodialysis was first started and the rating of present quality of life ($t = 5.48$, $df = 59$, $p < .001$). Subjects' retrospective ratings of their quality of life before hemodialysis were significantly greater than their ratings of present quality of life. There is a correlation of $r = -.53$, $p < .001$ between the means, indicating that persons who scored high in the quality of life ratings before hemodialysis was first started scored low in the present quality of life ratings.

Question 8

What are the critical domains of quality of life outcomes identified by Bahraini adult clients on maintenance hemodialysis?

Data were collected by one open-ended question asked after each participant rated his/her quality of life at the present time and retrospectively

(before dialysis was first started) on the Cantril ladder. The open-ended question asked the participants to state the reasons for putting themselves at a specific point on the Cantril ladder.

The researcher first reviewed all the 90 response items from the participants. Then the responses were translated into English. The translated responses were verified for clarity and accuracy of the translation by a bilingual graduate student. Responses sharing similar characteristics were grouped into categories that emerged from the data. To validate the categories, two graduate students were asked to assign the 90 responses to the categories identified by the researcher. For the critical domains of present quality of life, the agreement between the two graduate students and the researcher was 89% and 85% respectively. Summary of critical domains of present quality of life is presented in table 4.12.

The most frequently given responses were categorized under "physical health domain", while the least frequently given responses were categorized under "financial concerns domain". According to the responses, the physical health domain was related to reduced activities, lack of sleep, itching, bodyaches, and presence of fistula or shunt. Examples of responses classified in this category were:

**Table 4.12**
**Summary of critical domains of present quality of life (total response items= 90)**

| Domains of quality of life | Frequency | % |
|---|---|---|
| Physical health domain | 34 | 37.8 |
| Psychological health domain | 31 | 34.4 |
| Family concerns domain | 11 | 12.2 |
| Social concerns domain | 8 | 8.9 |
| Financial Concerns domain | 6 | 6.7 |

It is hard for me to move my body, I can't do the housework.

I am disabled always tired, I have severe bodyaches, maybe because I am getting older.

Now, I am tired all the time. I can't sleep well, and I am loosing my strength gradually.

I am sick, I can't get up from my bed and I have no appetite.

Nothing hurts me except the needles when they insert them in my arm.

My activities are much less now, I can't go out like before, and I can't work.

I have very bad itching it makes me nervous most of the time.

I feel that I am not as active as I use to be before dialysis was first started I can't sleep well. I feel that I am 20 years older than before.

I feel tired very easily, I feel tied to the machine three times a week sometimes I can't do anything after the dialysis is over.

Thirty-one responses were classified under "psychological health domain". These responses were related to uncertainty about future, being nervous, bored, and scared, and hopeless. Examples of responses classified under this category were:

I have no hope. I think of death very often. I think of other treatment. I always think about my children when I die who is going to take care of them.

I feel that my life has no meaning, I can't plan for my future, I want to get a job and get married like other healthy people.

Now, I can't do anything, my life is boring, always nervous, I spend most of the time at home.

I am bored. I hate the time I spend on the machine.

I am bored, and upset all the time, shouting and nervous, I feel that my son will leave me after sometimes because he is taking care of me now.

I am always scared when I am being dialyzed. I always feel that something might happen to me .....like my heart stops or I bleed to death .... I want treatment other than dialysis.

Eleven responses were classified under "family concerns domain". These responses were related to marital relationships, inability to work or do the housework, and loss of familial role. Examples of responses classified under this category are stated as below:

I don't like to come for the dialysis, my husband got another wife because I'm sick, I think of my children and how can they survive without me being around.

The illness and the dialysis together made me feel that my role in life is over, and I think there is a limit for everything.

I can't work. I can't even do the simplest job around the house.

Because of my illness, my husband does not want me, he does not care about me anymore and does not support me. He got another wife. I asked him for divorce but my children are not happy about my decision and they are not supportive of it. I feel pressured. He brought his second wife to live with me in the same house. I can't do anything about that. My children want me to wait and see maybe he will divorce the second wife.

Eight responses were classified under "social concerns domain". Responses categorized under this category are related to social isolation, and luck of social contacts. Examples of responses categorized under this category were stated below:

> I don't visit my neighbors or relatives as I used to do and because I don't visit them they don't visit me.
>
> I feel that I'm isolated from people I can't go out as I used to.
>
> Now my health becomes worse everyday, I feel isolated from people because I can't be like them.
>
> I feel bored because I am alone, and I can't go out like before.
>
> I feel that I am tied to the machine, I am stacked to the machine for four hours, I am thinking of not coming for the dialysis.

Six responses were classified under "financial concern domain". These responses were related to inability to support the family, and unemployment. Examples of responses classified under this category are stated below:

> I can't support my family, I have so many financial obligations toward my family.
>
> I can't work, upset most of the time, I am looking for a job or financial assistance, the dialysis makes me feel tired, I feel my whole life has changed.

For the critical domains of quality of life before dialysis was first started, there were 78 responses from the participants. The agreement between the two graduate students and the researcher was 91% and 88% respectively. Summary of critical domains of retrospective ratings of quality of life is presented in Table 4.13.

The most frequently reported responses were classified under "physical health domain". Responses classified under this category were related to absence of physical symptoms, having normal physical activities, and ability to control physical symptoms.

Twenty responses were classified under "financial concerns domain". Responses classified under this category were associated with holding a full-time job, and ability to financially support family.

Fourteen responses were classified under "family concerns domain". These responses were associated with having stable marital relationships, and ability to maintain the familial role.

Eleven responses were classified under "psychological health domain". Responses classified under this category were related to being an outgoing person, emotionally stable, and sense of freedom.

**Table 4.13**
**Summary of critical domains of retrospective rating of quality of life (total response items= 78)**

| Domains of quality of life | Frequency | % |
|---|---|---|
| Physical health domain | 27 | 34.6 |
| Financial concerns domain | 20 | 25.6 |
| Family concerns domain | 14 | 18.0 |
| Psychological health domain | 11 | 14.1 |
| Social concerns domain | 6 | 7.7 |

Six responses were classified under "social concerns domain". Responses classified under this category were related to maintenance of social contacts.

## Additional Findings

In an attempt to identify a set of predictors that explain a greater proportion of variance in quality of life, hierarchical multiple regression analyses were conducted to examine the contribution of the demographic variables, and treatment and illness-related variables to the prediction of quality of life. None of these variables contributed to the prediction of quality of life before dialysis was first started.

A three-step hierarchical multiple regression was used to explore the contribution of marital status, perceived social support, and emotive coping to the prediction of present quality of life. The selection of these variables was based on the zero-order correlation of these variables with present quality of life, and review of the literature.

In examining the correlations among the study variables, several relationships were found. Out of the demographic variables, only marital status was correlated with present quality of life ($r = -.32$, $p < .05$). Among the social support variables, only perceived social support was correlated with present quality of life ($r = .30$, $p < .05$). Among the coping methods, emotive coping had the highest correlation with present quality of life ($r = -.55$, $p < .001$).

Reported research studies provided inconsistent results with regard to the role of marital status in predicting quality of life among hemodialysis clients. Marital relationships have been studied as a source of social support which may influence quality of life.

Evans, et al. (1985) reported that marital status had a significant influence on quality of life of 859 hemodialysis clients. These results were not supported by Ferrans and Powers (1993) who found that marital status was not a significant predictor of quality of life in their sample of 349 hemodialysis clients.

In this 3-step hierarchical multiple regression, present quality of life was the criterion variable (Table 4.14). Marital status was entered in step 1, perceived social support was entered in step 2, and emotive coping was entered in step 3. A multiple R of .32 ($F = 6.56$, $p < .01$) was obtained when marital status was entered in step 1. A multiple R of .44 (F change = 6.26, $p < .02$) was obtained when perceived social support was entered in step 2. A multiple R of .63 (F change = 18.54, $p < .001$) was obtained when emotion-oriented coping was entered in step 3. The overall for the regression equation was $F = 12.03$, $p < .001$, $df = 3, 56$. The adjusted R Square = .36.

**Table 4.14**
**Hierarchical Multiple Regression Analysis of marital status, percieved social social support, and emotive coping methods on Quality of Life (N= 60)**

| Predictor Variables | Multiple R | R Sq | Adj R Sq | F | Sig F | R Sq | F Ch | Sig F Ch | Beta |
|---|---|---|---|---|---|---|---|---|---|
| **Marital Status** | .32 | .10 | .09 | 6.56 | .01 | .10 | 6.56 | .01 | -.27 |
| **Perceived Social Support** | .44 | .19 | .16 | 6.71 | .002 | .09 | 6.26 | .02 | .17 |
| **Emotive Coping** | .63 | .39 | .36 | 12.03 | .00 | .20 | 18.54 | .00 | -.48 |

**Adjusted R Square = .36 (Overall F = 12.03, p < .001, df = 3, 56)**

Marital status accounted for 10% ($p < .01$) of the variance in present quality of life. Perceived social support added 9% ($p < .02$) to the variance in present quality of life after the effect of marital status had been controlled for. Emotive coping added 20% ($p < .001$) to the variance in present quality of life after the effects of marital status and perceived social support had been statistically controlled. Significant predictors of present quality of life, in this sample, were marital status, perceived social support, and emotive coping.

## Additional Qualitative Data Analysis

Qualitative data were collected to further explore the participants' views about other methods of managing stressors related to hemodialysis, changes in social interactions, physical and psychological health, activities, and financial status since dialysis was first started, the most troublesome changes that affected participants' lives, and ways of dealing with these changes. Data were collected by four open-ended question addressing each of the above stated areas.

### Coping Methods

At the end of the interview, participants were asked what else helped them to manage the stressors related to hemodialysis. Participants reported an additional 51 methods that were used to manage the stressors related to hemodialysis.

The researcher reviewed all the 51 methods reported by the 60 participants, then deleted the redundant items. After deleting the redundant items, 19 different responses from the reported coping methods were compiled. The researcher, then, classified the 19 coping methods as (a) problem-oriented, (b) emotion-oriented, and (c) other coping methods. Out of the nineteen reported coping methods, only one method was classified as problem-oriented method.

To validate the classification of the coping methods, two graduate students were asked to classify the coping methods as (a) problem-oriented, (b) emotion-oriented, and (c) other coping methods. The items and their classifications are detailed in Appendix H.

Responses were compared with items from the Jalowiec Coping Scale. This comparison suggests that the level of abstractness of some of the items was not congruent with the level of the subjects understanding of some of the items of the Jalowiec Coping Scale. For example, the majority of the additional reported coping methods were activities done either to: (a) distract oneself by doing something enjoyable, (b) try to keep busy, or (c) do relaxation techniques. When subjects were asked to rate the frequency of using the above three items, 82% of the subjects reported that they never used relaxation technique, 52% reported that they never tried to distract themselves by doing

something enjoyable, and 48% reported that they never tried to do thing to keep busy.

Changes Experienced by Clients Since Dialysis was First Started

When participants were asked about changes they experienced since hemodialysis was first started, they reported experiencing a variety of negative and positive changes. Participants reported 35 negative changes and only five positive changes.

For the negative changes, the researcher first reviewed all the 35 responses obtained from 59 participants. Then, grouped together the responses that share similar characteristics based on emergent categories identified by the researcher. These categories include changes in social interactions, changes in physical health, changes in psychological health, changes in activities, and changes in financial status.

To validate the previous categories, two graduate student were asked to assign the responses to the categories. Agreement between the two graduate students and the researcher was 92% and 89% respectively. Table 4.15 presents a summary of the major categories of the negative changes experienced by the participants since the beginning of the hemodialysis treatment. The most frequently given responses were categorized under "changes in physical health". These responses were related to physical

**Table 4.15**
**Summary of the major categories of the negative changes experienced by the participants since the begininning of hemodialysis**

| Categories | Frequency | % |
|---|---|---|
| Changes in physical health | 13 | 37.1 |
| Changes in psychological health | 10 | 28.6 |
| Changes in physical activities | 6 | 17.2 |
| Changes in social interactions | 4 | 11.4 |
| Changes in financial status | 2 | 5.7 |

symptoms associated with progression of renal failure and the hemodialysis treatment.

Participants reported remarkably fewer positive changes since the beginning of hemodialysis than negative changes. All the positive changes reported were related to physical health. These changes were "nausea disappeared," "difficulty in breathing is less," "generally I feel better," and " swelling in my feet is better".

Most Troublesome Changes

Participants were asked to describe the most troublesome changes they experienced since hemodialysis was first started. Out of the 35 negative changes reported earlier by the participants, 18 were reported as being most troublesome negative changes. These changes were reported by the majority of the subjects (Appendix I).

The majority of the responses were related to changes in physical, and psychological health, and physical activities. The least reported changes were changes in social interactions, and changes in financial status. This result is congruent with the quantitative finding of social support measures. These findings showed that 56 subjects (93.3%) had at least one source of social support which provided situational support when needed. These subjects also

reported that either they were "fairly" or "very" satisfied with the help they received from their social support resources.

These results were further supported by the unique contribution of perceived social support to the prediction of subject present quality of life. Although the contribution was not high, it was the highest among the contribution of the other social support variables. These findings also reflect the cultural influence in terms of social interaction and social support.

When subjects were asked about how they deal with these changes, the following responses were elicited:

> I go to see a doctor, I spend most of my time in the hospital.
>
> I look for financial help from different societies and other resources, but people nowadays don't like to help poor people like me.
>
> I usually take medicine to make me feel better and relieve my pain.
>
> I take certain herb and other home remedies to treat my pain and difficulty in breathing.
>
> I lay down in bed most of the time whenever I feel tired and not able to do anything.
>
> Do nothing, just be patient and trust God.
>
> I try to come for dialysis according to the schedule because if I miss one treatment, I don't feel good.

## Summary

This chapter presented the results of the findings of the study. Descriptive statistics were used to describe the demographic characteristics of the study sample, and treatment and illness-related variables. Cronbach's alpha coefficients were computed to examine the reliabilities of the study instruments. Pearson Product Moment Correlations were used to examine the correlations among major variables of the study.

Pearson Product Moment Correlations were also used to examine the proposed relationships in this study. Hierarchical multiple regression analyses were computed with present quality of life as the dependent variable. The independent variables were; social support variables, problem-oriented coping, and emotion-oriented coping. Of the social support variables, only perceived social support accounted for significant 10% of the variance in present quality of life. Problem-oriented coping accounted for only 1% of the variance in quality of life. Emotion-oriented coping contributed significantly to the prediction of quality of life, with 24% of the variance in quality of life. The proposed model explained a total of 27% of the variance in present quality of life.

Qualitative data were presented and compared to quantitative data. Qualitative findings call for special consideration to the cultural issues related

to the use of coping methods and quality of life among adult Bahraini clients on maintenance hemodialysis. These findings revealed a number significant factors related to the perception of quality of life that are culturally acceptable and are unique to the study sample.

# CHAPTER V

# SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter is organized into three sections. The first section presents a summary of the study which includes, a description of the study, research questions, methodology, data analysis techniques, and findings. The second section presents discussion and interpretation of the findings related to: (a) research questions and additional findings; (b) methodological issues related to data collection procedures, data collection instruments, data analysis techniques, and generalizability of the results, and (c) conclusions related to findings of the study. The third section presents the recommendations for future research as well as implications for nursing, theory, education, and practice.

## Summary of the Study

The purpose of this cross-sectional descriptive exploratory study was to explore the relationships between social support and coping methods and their contribution to the prediction of quality of life in adult Bahraini clients on maintenance hemodialysis. Selected concepts from Lazarus and Folkman's (1984) cognitive theory of stress and coping served as a conceptual framework for this study.

Based on these concepts, a social support, coping, and quality of life model was proposed. The proposed model examined the relationships among social support variables (availability of social support resources, satisfaction with social support resources, and perceived social support), the use of coping methods (problem-oriented and emotion-oriented coping), and quality of life in adult Bahraini clients on maintenance hemodialysis.

Eight research questions were generated from the model. Qualitative data were also collected through open-ended questions to expand the quantitative findings and further explore clients' experience of being on hemodialysis.

Data were collected from sixty outpatient adult clients who have been diagnosed with ESRD and were on hemodialysis at the time of data collection period. Instruments used in this study included the Arabic translated version of a single-item measure of social support, Personal Resource Questionnaire (PRQ) Part II (Weinert, 1987), modified version of Part A of the Jalowiec Coping Scale (JCS), Cantril's ladder (Cantril, 1965), and demographic data questionnaire.

The reliabilities of the study scales and subscales were computed. For all scales and subscales the alpha coefficients were greater than .70 except for the emotion-oriented coping subscale with an alpha coefficient of .40. Two

strategies were used to improve the reliability of the emotion-oriented subscale. First, the JCS items were classified into eight subscales and the reliability for each subscale was computed. The alpha coefficients ranged from .47 to .93. Second, eleven items with item-total correlations that were negative correlation, or below .15 were deleted. The alpha coefficients of the revised subscales ranged from .55 to .93.

Data were analyzed using descriptive statistics, Pearson Product Moment Correlations, hierarchical multiple regressions, t-test, and content analysis. Data analysis of the JCS was based on the eight subscales within the broad classifications of problem-oriented coping methods, and emotion-oriented coping methods. The confrontive coping subscale was classified under the problem-oriented coping methods and the remaining seven subscales were classified under the emotion-oriented coping method.

The relationships proposed by the model were partially supported. Availability of social support resources, and satisfaction with social support resources were related to the use of emotion-oriented coping methods, but they were not related to the use of problem-oriented coping methods. Perceived social support was significantly related to the use of both problem-oriented coping methods, and emotion-oriented coping methods.

Using hierarchical multiple regression analysis, the proposed model of social support variables, emotion-oriented coping methods, and problem oriented coping methods were found to explain 27% of the variance in the present quality of life. Additional data analysis showed that marital status, perceived social support, and emotive coping (a subscale of emotion-oriented coping methods) were significant predictors of present quality of life in adult Bahraini clients on hemodialysis. These predictors explained 36% of the variance in present quality of life. Subjects' ratings of present quality of life were significantly lower than their rating of quality of life before hemodialysis was first started.

Content analysis of the responses to open-ended questions revealed the important domains of quality of life as perceived by the respondents. Additional coping methods reported by respondents were congruent with the quantitative findings.

## Discussion of the Findings

Discussion of the findings will be presented in three sections. The first section discusses the research findings related to social support, coping, correlation of social support variables and coping methods, predictors of quality of life, comparison between retrospective and present quality of life, and additional findings. The second section presents the methodological issues

related to data collection procedures, data collection instruments, data analysis techniques, and generalizability of the results. The third section presents the conclusions recommendations and implications related to the study.

Research Findings

In this section findings related to the research questions are discussed. Additional quantitative and qualitative findings are discussed as well.

Social Support. Of the total sample, 56 (93.3%) indicated that they had at least one social support resource that they can turn to for help. Only four (6.7%) had no social support resources available when needed. One explanation for this result may be the cohesive nature of the Bahraini family.

Another possible explanation might be the social obligation for the common good among Arabs especially at times of sickness or a death in a family. A third possible explanation is that the vast majority of elderly people live with their children or other relatives who could provide assistance and support when needed. Singles are not permitted to live alone (singles in Bahrain refers to those who have never been married) as it is not culturally acceptable.

The majority of subjects (98.3%) were satisfied with the help they received from social support resources. The degree of satisfaction ranged from "little satisfied" to "very satisfied". According to Arab culture, especially

Bahraini culture, it is not culturally acceptable for an individual who needs help to say that he/ she is not satisfied with the help received.

One possible explanation for the above findings is that in Islam, people are expected to be satisfied and thank God for everything he provided. Therefore, assistance and support provided by other people are regarded as being provided by God since those people are believed to be sent by God to provide help when needed. Another possible explanation may be related to the nature of the disability these clients experience as a result of being on hemodialysis. These clients may be satisfied with any kind of help they receive to manage their stressors.

A third possible explanation may be that subjects are not aware of the resources available for help and they may feel satisfied with their limited resources. Moreover, the high level of illiteracy among subjects may have contributed to the lack of awareness of support resources available. Another possible explanation may be related to the presence of another family member during the interview, although subjects were instructed to be interviewed alone, it was the subjects' choice to be interviewed while a family member was present. The lack of privacy during the interview may have contributed to high degree of satisfaction reported by the majority of the subjects. Although the majority of the subjects were satisfied with the help they received, some

subjects cried during the interview and indicated that because of their inability to reciprocate support they will eventually loose their support networks.

Subjects who reported more comorbid conditions reported lower perceived social support scores ($r = -.31$, $p < .05$). This may be attributed to the increased demands on the social support network when an individual is confronted with more chronic illnesses that requires continuous provision of social support in order to be perceived by the individual as being supportive. Another explanation may be that the inability of these clients to reciprocate social support with their support system may contribute to lack of provision of support from the client's social network.

Arab culture is shaped by the religion of Islam. The teachings of Islam concerning social responsibilities are based on kindness and consideration of others. It defines the responsibilities and rights of various relationships. The first obligation is to the immediate family members (parents, husband/wife, and children), then other relatives, neighbors, friends, and acquaintances, orphans and widows, the needy of the community, fellow Muslims, all fellow human beings, and animals ( Al-Eslah Society, 1941).

According to Islamic beliefs, there is a complementary ongoing transaction between the individual and society. Individuals can influence and

be influenced by each others (Al-A'ali, 1993). The individual is responsible for the common welfare and prosperity of his society ( Abdul-Ati, 1977).

Family members are responsible to provide emotional support for the sick and act as spiritual care providers. Prayers and recitation of Quran in groups are believed to decrease the sick person's sufferings (Ali, Khalil, Yousef, 1993).

Coping. Coping and learning to live with chronic illness is culturally based. The meaning of health and illness behaviors of a specific cultural group can only be understood within their cultural context (Flaskerud, 1984; Lipson & Meleis, 1983; Meleis, 1981; Meleis & Jonsen, 1983; & and Young, Bukoff, Waller, & Blount, 1987).

Arabs believe in predestination. They accept life events e.g. having chronic illness, as unavoidable results of God's will and a way to minimize suffering in life after death. Therefore, life occurrences should not be questioned, instead, they should be accepted and one learns to live with them and their resulting consequences (Ali, Khalil, & Yousef, 1993).

In this sample, praying and putting trust in God was reported as "often used" by 51 (85%) subjects. One possible explanation is that the majority of the Bahraini people are very religious and they believe that putting trust in God is an integral aspect of the religion. This finding is consistent with Baldree,

Murphy, and Powers (1982). In their sample of 35 hemodialysis clients, the researchers found that prayer and trust in God was one of the seven most frequently identified coping methods used by hemodialysis clients.

Gurklis and Menke (1988) found the same results when they replicated the Baldree, Murphy, and Powers study (1982). Greenberg et.al. (1975) stated that hemodialysis clients use religion to cope with the anxiety surrounding death.

Jarvis and Northcott (1987) concluded that participation in religious practices may place the individual within a support group that provides help at times of crisis. Moreover, it may promote attitudes of helpful perspectives to manage stressful life events.

Content analysis of additional reported coping methods suggested that there is incongruency between the level of abstractness of some of the items of the JCS and the clients' understanding. The majority of the additional reported coping methods were activities performed by subjects just "to kill the time".

Out of the nineteen additional coping methods reported by the participants, seventeen coping methods were categorized as emotion-oriented coping methods. This result supports other studies with regard to the predominant use of emotion-oriented coping methods.

Jalowiec (1993), in a literature review of 57 articles on how adults cope with stressors of chronic illness, found that the majority of subjects used emotion-oriented coping. Lazarus and Folkman (1984) provided a possible explanation for the predominant use of emotion-oriented coping. They postulated that problem-oriented coping methods tend to be situation-specific, while emotion-oriented coping methods are more applicable across different situations.

Social Support and Coping. Availability of social support resources, and satisfaction with social support resources were not related to the use of problem-oriented coping methods. Availability of social support resources was positively associated with the use of supportant coping, and negatively associated with self-reliant coping (two subscales of emotion-oriented coping methods).

Satisfaction with social support resources was positively associated with supportant coping and negatively associated with fatalistic coping (two subscales of emotion-oriented coping methods). Perceived social support was associated with problem-oriented coping methods and all the subscales of emotion-oriented coping except self-reliant coping methods.

One explanation for these findings may be related to the sick role Arab clients play when they are confronted with illness or major life crises. Another

explanation may be that clients' perceived social support acts positively to facilitate general coping methods necessary for adaptation, regardless of the type of coping methods used.

According to Arab culture, clients should be dependent and nurtured, and the client is expected to assume a passive role in terms of health care decision-making. When a family member suffers from chronic illness, family is expected to provide emotional support and to show hardiness and caring (Ali, Khalil, &Yousef, 1993).

Although in Arab culture caring for a sick family member is a social obligation and considered part of everyday life, clients with chronic illness require additional support to deal with the stressors of the life-threatening disease. Clients are emotionally stressed by their chronic illness and their inability to minimize the physical and psychological burdens of the caregivers. In addition, clients who have a poor-functioning social networks may have fewer abilities to cope with the stressors of chronic illness (Lindsey, Ahmed, & Dodd, 1985).

The findings that social support variables, especially perceived social support, are related to the total coping scores supports the findings of other research studies which examined social support and coping methods among Arab clients with chronic illness. Ali and Khalil (1991) found that receiving

support from family was perceived as an important way of coping among Egyptian mastectomy clients. Meleis (1981) contended that, in Arab culture, extensive social network is very important for satisfactory coping with everyday events. These networks provide advice and guidance in crisis.

The findings that social support was associated with coping and adaptation among chronically-ill clients supported the findings of studies conducted by Western researchers. Christensen, Wiebe, Smith, and Turner (1994), Devins, Mann, Mandin, Paul, et al. (1990), and Siegal, Calsyn, and Guddihee (1987) examined the relationships between social support and psychosocial adjustment, adaptation, and survival among hemodialysis clients. Findings of these studies showed that social support has a positive effect on adaptation and adjustment to the stress of hemodialysis through the engagement of coping methods that facilitate the adaptation processes.

According to Lazarus' perspective on coping with chronic illness, people use a combination of problem-oriented and emotion-oriented coping to cope with the stressors of chronic illness regardless of the type of stressors (Lazarus & Folkman, 1984). In contrast, the majority of subjects in this study reported the use of only emotion-oriented coping.

Predictors of quality of life. The contribution of predictor variables was examined in the analyses of questions four through six. A proposed model was designed to determine the contribution of social support and coping to the prediction of quality of life. The proposed theoretical model predicted a significant but relatively small amount of variance in the quality of life in adult Bahraini clients on maintenance hemodialysis.

Lazarus (1992) offered four reasons for the difficulty in demonstrating the influence of psychosocial factors on health. First, health is affected by several factors that researchers have little or no control over. Second, the stable nature of health makes it difficult to demonstrate such influence. Third, longitudinal rather than cross-sectional research designs are more appropriate to demonstrate such influence. Fourth, lack of conceptual guidelines addressing a workable meaning of health contributes to this difficulty.

In this study, several factors contributed to the difficulty in predicting the influence of social support variables and coping on quality of life. These variables include: (a) personal characteristics of the subjects such as age, sex, level of education, the nature of the chronic illness, and marital status which might have altered subjects responses to the questionnaire; (b) the cross-sectional design of the study may have contributed to this issue since it only reflects clients opinion at one point in time; and (c) the cultural and

individual-based conceptual definition of health among the study subjects may have limited the use of a unique definition of health amenable for measurement.

In an attempt to predict additional sources of variance in quality of life, hierarchical multiple regression analysis with demographic, illness-related, and treatment-related variables were also included in the analysis. Results of the additional regression analysis indicated that the addition of marital status had explained more variance in quality of life than the proposed model. Although educational level, gender, and age of subjects were highly correlated with the use of different coping methods, they failed to contribute to the prediction of quality of life.

Among the three social support variables (availability of social support resources/presence of a confidant, satisfaction of social support resources, and perceived social support), only perceived social support made a contribution to the present quality of life. Although this contribution is low, it confirmed the results of previous studies with regard to the importance of perceived social support in predicting various domains of quality of life.

Emotion-oriented coping methods, specifically emotive coping, increased the prediction of present quality of life by a larger percentage than other predictors (24%) after the social support variables and the use of

problem-oriented coping had been accounted for. This indicated that the use of emotion-oriented coping methods made a significant contribution in predicting present quality of life in adult Bahraini clients on maintenance hemodialysis.

One possible explanation for the high contribution of emotion-oriented coping methods to the prediction of quality of life may be that these coping methods provide temporary relief of stress when used for a considerably short time. As the level of stress experienced by these clients increased, they tended to use more objective methods to cope with the disease. Another possible explanation is that this finding may had been methodologically influenced because of the bias of the measurement instrument used to measure coping in this sample. A third possible explanation is that this finding may had been influenced by the personal characteristics of the subjects such as level of education and marital status.

The predictor variables including marital status, perceived social support, and emotive coping explained 36% of the variance in the present quality of life in adult Bahraini clients on maintenance hemodialysis. Marital status alone accounted for 10% of the variance in present quality of life.

Marital status had a negative correlation with quality of life. Married subjects scored lower in present quality of life. This findings may be explained by the explanation of Baldree, Murphy, and Powers ( 1982). The researchers

found that married hemodialysis subjects scored higher in the Hemodialysis Stressors Scale than the unmarried subjects. This finding may be related to the fact that being married carries more responsibilities and obligations. Therefore, individuals experience greater stress when they fail to meet these obligations.

Islam views marriage as a strong bond and a challenging commitment to life, society, and to the meaningful survival of human race. Marital relationships are based on kindness and equity, compassion and love, sympathy and consideration, patience and good will (Abdul-Ati, 1977).

In this study, 42 (70%) subjects indicated that they do not turn to their husbands/wives for help. Only 18 (30%) subjects turn to husbands/ wives for help. These results suggest that marital relationships had been disrupted by the chronic illness.

The disrupted marital relationships might be related to either inability to maintain marital/familial role or to the consequences of permitted polygamy among male Muslims. Of the 28 male subjects, only eight were employed. The unemployed subjects were either supported by children, retirement, social security, relatives, or savings.

In Islam, the husband is responsible for maintaining a household for his wife, and for providing food, clothing, and general necessities. Therefore, unemployment may place additional stress on the individuals and contribute to

the disruption of the marital/familial relationships. Although employment status was not a significant predictor of quality of life, in this sample, 28% of the subjects reported that they had family or financial problems that contributed to their perception of quality of life.

In this study, subjects' verbal comments reflected that financial constraints were experienced by the majority of the unemployed subjects. These subjects also indicated that they would prefer to work and find jobs that are compatible with their physical abilities.

Verbal comments from the majority of the female subjects reflected loss or disrupted familial/marital role. Some indicated that they were unable to do the housework, participate in family or social activities, or maintain marital relationships. In Islam, the wife is responsible for providing comfort, affection, and gratification (Stowasser, 1984). An important wife's obligation is to be sexually responsive, attractive, and available. These obligations are reconsidered during illness (Abdul-Ati, 1977).

In this sample, three of the married female subjects indicated that their husbands have second wives. It is permissible in Islam for a man to have a second wife if his first wife suffers from chronic illness which makes her deny his sexual relations.

Although polygamy is permitted in Islam, it is the husband's obligation to deal justly with his wives. This applies to housing, food, clothing, and kind treatment. If one is not sure of being able to deal justly with them, the Quran says "then (marry) only one" (Quran 4:3). Furthermore, a following verse from Quran discourages polygamy. It says "you are never able to be fair and just as between women even if it is your ardent desire" (Quran 4:129).

Nursing literature provides varying results about predictors of quality of life. In a recent study, black race and social support were significant predictors of health-related quality of life among dialysis clients (Tell, Shumaker, Russell, Hylander, & Burkart, 1995). Morgan (1990) found that income was positively related to quality of life among hemodialysis clients receiving federal income support. Income, financial status, and support from husband and children were predictors of quality of life among hemodialysis clients in two additional studies (Levy, Wynbrandt, 1975; & Joel, 1973). Ferrans and Powers (1993) found that age, employment, and education were significant predictors of quality of life among hemodialysis clients.

Evans, Manniner, Garrison, Hart, Blagg, Gutman, Hull, and Lowrie (1985) distinguished between predictors of objective and subjective quality of life. Objective quality of life refers to functional impairment and the ability to work. Subjective quality of life refers to well-being, psychological

affect, and life satisfaction. The researchers found that age, race, education, marital status, and home ownership were significant predictors of subjective quality of life. Sex, race, previous failed transplantation, and duration of treatment were not significant predictors of objective quality of life. Age, education, and comorbidity were significant predictors of objective quality of life among 859 dialysis clients.

There is inconsistency in the literature about the relationship between employment status and quality of life. Ferrans and Powers (1993), and Wolcott, Nissenson, Landsverk. (1988) found that employed hemodialysis clients had higher quality of life than those who were unemployed. Hatz and Powers (1980) found that unemployed subjects reported higher level of life satisfaction than either full-time or part-time employed subjects. One possible explanation for the latter findings is that inability of the hemodialysis patients to coordinate work schedule with the treatment schedule. Therefore, clients are left with little or no time to maintain their pre-dialysis lifestyle.

Comparison between retrospective and present ratings of quality of life. When the ratings of present quality of life were compared with retrospective ratings of quality of life (before hemodialysis was first started), subjects' ratings of present quality of life were significantly lower than their retrospective ratings ($t = 5.48$, $df = 59$, $p < .001$). This result supports Hatz

and Powers (1985) findings that clients perceived their past life as significantly better than their present life. The researchers speculated that the general health status of hemodialysis clients had significant contribution to their appraisal of quality of life. Similar findings were supported by Hoothay, DeStefano, Leary, and Foley-Hartel (1990).

In this sample, subjects indicated that the primary reasons for reporting lower ratings in present quality of life than their past ratings were poor physical health, followed by psychological health, and family concerns (domains of quality of life in this study). These reasons reflect the common Arabic culture beliefs about health. According to the Arabic culture, a person is considered healthy if he/she can work, live independently, and meet personal and family needs (Reizian & Meleis, 1987).

Similarly, analysis of qualitative data concerning the negative changes and the most troublesome changes experienced by participants support the reasons given by subjects for specific quality of life ratings. The most frequently reported negative changes were: changes in physical health, psychological health, and changes in physical activities.

Additional Findings.

Due to the low level of formal education, the potential influence of education on subjects' use of coping methods was explored. Better educated subjects reported the use of more problem-oriented coping methods than subjects who were less educated. One explanation for this finding may be better education influences problem-solving abilities and enhances the individual's positive and active strategies to overcome the stressful situation. Another explanation may be that education is highly appreciated in Bahrain and educated individuals are expected to exhibit a more active role in the decision-making process concerning health and health care options.

In this study, the majority of the subjects (61.6%) had never attended school. Prior to 1919, there was no formal education in Bahrain. Childhood education began at home with ritual prayers at the age of seven. The first elementary school was the "Muttawa". The curriculum of this school was based on the Quran and teaching of Islam, and was directed by "Mullas", religious leaders, at their homes. When trade expanded and pearl-diving was at its peak, wealthy merchants sensed the need for more comprehensive curricula. They hired private teachers to teach their children mathematics related to diving and trading (Shirawai, 1989). Thus, in the early 20th century, children of wealthy people had the privilege of being educated. The majority of the

population were of low socioeconomic class who could not afford to provide their children with any form of education.

In 1919 the first boys' school was opened, followed by a girls' school in 1928. With the discovery of oil in 1932, there has been a steady and planned change in education. During that period, the education system was put under the direct authority of the Government. This progress continued until 1945.

In 1945, a decline at all levels of education was noted. For various reasons drop out rate increased. Boys with minimal education left school and could easily find well-paid jobs. Boys from poor families were forced by their illiterate parents to leave school in order to meet their family's basic needs (Shirawi, 1989).

In Bahrain, until the mid fifties, girls had little opportunity or need for education. Girls were expected to remain home-bound at the age of ten. Early marriage had contributed to the decline in girls' education during that era of educational history in Bahrain. At the age of eleven, a girl was expected to behave and be treated like an adult in preparation for marriage at the age of twelve.

In this sample, 61.7% of the subjects were 50 years or older, and 38.4% were 60 years or older. Therefore, many of the participants in this study were born during that period of educational instability and this may explain the high

percentage of illiteracy in this study. In addition to the 61.7% of the subjects who had never been to school, 20% of the subjects had an educational level of 6th grade or lower, making a total of 81.7% of the subjects with no or minimal formal education. These findings may explain the difficulty that subjects dealt with during the interview as a result of high level of abstractness of the items in the JCS.

In this sample, more than 50% of the subjects had been on dialysis for less than one year. Although, there was no statistically significant relationship between the number of months on dialysis and quality of life, the majority of subjects rated their present quality of life as being lower than their quality of life before dialysis was first started. One explanation for this finding may be that subjects needed more time to adapt to the overwhelming experience of loss and the consequences of such experience.

This result supports the findings of Baldree, Murphy, and Powers (1982), Tietze (1984), and Gurklis and Menke (1988). They reported that there were no significant relationships between level of stress and length of treatment, and number of months on hemodialysis.

Nicholes and Springford (1984) concluded that in the early months of dialysis, adjusting to the new life-style as a result of the illness and its treatment is predominant. The profound physical and emotional changes contribute to the

disruption of life-style of hemodialysis clients. As hemodialysis treatment continues, technical problems such as vascular access may add to the overall difficulties that these clients are expected to live with. These difficulties, in turn, impose additional threat to client's health and life.

Results of this study provided limited support to previous international studies with regard to the contribution of social support, and coping methods to the prediction of quality of life. One explanation of these results might be that the instruments used to measure the variables were insufficient to detect variance in the sample. Another explanation is that little attention has been given to the cultural issues related to the concept of coping and other factors that contribute to the prediction of quality of life in adult Bahraini clients on maintenance hemodialysis. Based on the responses, the content validity of the JCS was further examined and suggestions to modify the instrument were proposed.

Special consideration should be given to specific physical changes and level of stress. These factors should be addressed in future research of quality of life in adult Bahraini clients on maintenance hemodialysis.

Methodological Issues

This section discusses the methodological issues in relation to data collection procedures, data collection instruments, data analysis techniques, and generalizability of the study findings. Conclusions drawn from the findings of this study are then presented.

The participants in this study were recruited through a brief explanation about the study by the hemodialysis units supervisors while clients were in dialysis. This method was successful in obtaining participants who were willing to be contacted by the investigator of the study. The possibility of selection bias exists when subjects volunteer to participate in a study. This bias is culturally specific as it is not customary, in Bahrain, to refuse an invitation when being asked for a favor.

The questionnaire included 85 items, six open-ended questions, and the demographic data. It took approximately 60 minutes to interview most subjects, a little longer for others. Many subjects expressed that the interview was too long, especially for those who preferred to be interviewed in the dialysis units while they were on dialysis.

On the JCS, many subjects were unable to understand the meaning of the coping methods. The low educational level of the majority of the subjects was not congruent with the abstractness level of some of the coping methods.

For example, subjects had difficulty understanding items such as "tried to get out of the situation". Moreover, items needed detailed explanation, and examples to capture the nearest possible meaning of the items. This pattern may be attributed to the expansive and flowery nature of the Arabic language (Meleis, 1991).

The multidimensionality of the coping concept was not adequately captured in the problem-oriented and emotion-oriented coping classification. This issue was reflected in the low reliability of the emotion-oriented coping subscale. The reliabilities were improved when the JCS was classified into its eight subscales representing various dimensions of the concept of coping.

For all the study instruments, it was difficult for the subjects to indicate their responses cognitively on the Likert-type scales. The subjects needed visual scales representing the response steps on the scales. In addition, each item on the scales was read and, if needed, explanation was given. Still, subjects did not understand to respond to a statement, they asked what was the question. Therefore, each statement was put into a question form to facilitate comprehension.

The method of administering the questionnaire itself, interview, reflects social desirability bias. It is possible that subjects might not have answered as

they really felt. One of the subjects who could read and write indicated that his responses would have been different if the questionnaire was self-administered.

All the instruments were developed in the United States by American authors. For this study, they were translated into Arabic. Although the meanings of the translated version of the scales were verified by people who are fluent in both languages, there are concerns as to whether or not some expressions have similar meanings in the Bahraini culture especially among persons who had not experienced Western education.

Conclusions

Despite the methodological concerns, the limitations of small convenience sample size and homogeneity of the subjects with regard to the educational level, culture, and marital status, as well as limited analysis, the proposed model of social support and coping explained a considerable amount of variance in quality of life among adult Bahraini clients on maintenance hemodialysis. Perceived social support, emotive coping, and marital status had the greatest power for predicting quality of life. Findings from this study should be considered as exploratory and interpreted with caution. Generalizability of the study findings is limited to the studied sample because of the small sample size, the selection method, and the cross-sectional design of the study.

## Recommendations and Implications

Based on the findings of this study, this section presents the recommendations for further research. Implications for nursing theory, research, education, and practice are also presented.

Recommendation for further research

1. Future studies should incorporate appropriate qualitative methods to explore the holistic meaning of quality of life and coping among adult Bahraini clients and to eliminate the barrier of educational level.

2. More culturally-sensitive and reliable instruments for measuring coping should be considered in future research.

3. Because of the distinctively different social, cultural, and marital role of Bahraini men and women, data obtained regarding the perception of quality of life might be analyzed separately for each gender in future research.

4. A multidisciplinary research program should be considered to identify the significant predictors that contribute to the prediction of quality of life other than social support and coping methods.

5. Investigation of the relationships among preferred styles of coping, perceived health threat, uncertainty, and responses to medical treatment should be done. Findings of such studies may highlight some important aspects to

consider when planning and providing care to clients, and initiate appropriate referrals to deal with any potential problems.

6. Investigation of the autonomy/dependency dimension and its relevance to better quality of life and adaptation process should be considered.

7. The small sample size limited the use of appropriate multivariate analysis. The use of path analytic techniques to specify the direct and indirect influences of social support and coping on quality of life should be considered in future research with larger samples.

Implications for Nursing Theory

Based on the findings of this study, nurse scholars should consider an ongoing process of building a body of nursing knowledge related to complex constructs such as social support, coping, and quality of life. Quality of life has received considerable attention in nursing literature and needs continued development. Social support and coping can influence or improve quality of life among chronically-ill clients.

The empirical relationships between social support and coping and their prediction of quality of life are complex in nature due to the inconsistent theoretical conceptualization of these concepts in the literature. Systematic definition of each of these concepts is a precursor for theory development which is critically needed to link these psychosocial concepts.

In this study, perceived social support, marital status, and emotive coping were found to be significant predictors of quality of life in adult Bahraini clients on hemodialysis. Therefore, further study of developing a theory that incorporates these concepts can assist systematic investigation and exploration of the contribution of quality of life. In addition, practice theory can guide clinicians in planning appropriate interventions to help improve the quality of life of hemodialysis clients.

Implications for Nursing Education

Based on the findings of this study, nurse educators should:

1. Convey the importance and significance of social support in both classroom teaching and clinical settings to assist clients and their families cope with the stressors of chronic illness.

2. Promote the shift from a medical model with emphasis on a medical diagnosis and treatment, to a holistic model related to client's care which incorporates all aspects of individual's life.

3. Incorporate the concepts of social support, coping, and quality of life in the curricula's conceptual framework.

Implications for Nursing Practice

Based on the findings of this study, nurses clinicians should:

1. Be more sensitive in recognizing: (a) specific strategies to encourage more adaptive problem-oriented coping methods and discourage maladaptive ones, and (b) personal characteristics of individuals and characteristics of the environment that force people to use one or another form of coping. In this study, age and educational level were associated with the use of different coping methods.

2. Be cognizant of the low educational level of the majority of hemodialysis clients and use appropriate strategies to assess their coping methods, encourage them to express their feelings about the consequences and alternatives of interventions, and be active in setting goals related to treatment.

3. Encourage the involvement of family members and significant others in various aspects in client's care, and in planning appropriate recreational and teaching programs to help clients cope with the treatment-related stressors.

4. Provide an ongoing assessment of clients' support system and their perception of the support provided by their social network. This assessment must be culturally specific as indicated in this study by the negative relationship between marital status and quality of life. This result was contrary to some previously published research with various population in Western cultures.

5. Recognize the importance of and facilitate optimum physical functioning for hemodialysis clients.

6. Design and implement support groups and support multisectoral/multidisciplinary vocational rehabilitation and marital counseling programs. None of these programs are currently available in Bahrain for hemodialysis clients. It is also important to evaluate the outcomes of these programs and their effects on improving the quality of life of these clients.

## Summary

This chapter presented the summary of the study and discussion of the study findings. Methodological issues related to data collection procedures, data collection instruments, data analysis techniques, and generalizability of the study were discussed. Conclusions were presented and recommendations for future research were suggested as well as implication for nursing theory, research, education, and practice.

# APPENDICES

## Appendix A

Permission Letters to Conduct the Study

4540 1925

# STATE OF BAHRAIN

MINISTRY OF HEALTH

P. O. Box 12,

Bahrain, Arabian Gulf.

1

دولة البحرين

وزارة الصحة

ص. ب ١٢

البحرين ـ الخليج العربي

No. .....
Asa/ma/ 1451

الرقم : .....

Date : .....
August 13, 1994.

التاريخ : .....

Ms. Mouza Suwaileh
300E 30th Street £ 205
Austin, Tx. 78705
Unite States of America.

Dear Ms. Suwaileh,

Sub: Research study to investigate the effect of perceived and received social support on the coping behaviors of adult clients on Maintenance hemodialysis.

I am in receipt of a copy of your letter dated July 12, 1994 asking for approval to conduct the above mentioned research study in Salmaniya Medical Center. The office of the Chief of Medical Staff have approved your request and you may start the research on 15/5/1995 as mentioned in your letter.

Thank you,

Yours sincerely,

Dr. Ahmed Salim Al Arrayed
Deputy Chief of Medical Staff
Salmaniya Medical Center.

Bahrain Defence Force
Medical Services
P.O. Box 28743, State of Bahrain
Tel. : 663366
Telex : 8881 BDF HOS BN
Fax. : 0973 - 669166
Cable : DEFFA'A

قـــوة دفـــاع البحـــرين
الخدمـــات الطبيـــة
ص.ب : ٢٨٧٤٣ ـ البحـــرين
تليفون : ٦٦٣٣٦٦
تلكس : ٨٨٨١ بي دي إف هوز بي إتش
تليفاكس: ٦٦٩١٦٦ ـ ٠٩٧٣
برقياً : دفـــاع

19 NOV 1994

الرقم :
التاريخ :

Ref.: DMS/1/307/94

Date : 12.11.1994

Dr.Fariba Al-Darazi,
Director of Training,
Ministry of Health,
P.O.Box No.12,
State of Bahrain.

Dear Dr.Al-Darazi,

Sub: Permission to conduct dessertation research

Thank you for your letter Ref.No.FAM/ak/BDF-MS/6832 dated October 26, 1994 regarding the above mentioned subject.

I am very happy to inform you that permission is hereby granted for Miss Mouza Suwaileh to conduct dissertation research at the B.D.F. Hospital.

Best regards.

Yours sincerely,

Maj.Gen.Mohammad A.Al-Khalifa,
Commander of Medical Services.

c.c. Col.Essa Amin
Lt.Col.Abdulrahman Bu-Ali

12-12-1994 11:05 HOSPITAL DIRECTOR, BDF. +973 659998 P.01

**Bahrain Defence Force**
**Medical Services**
P.O. Box 28743, State of Bahrain
Tel. : 663366
Telex : 8881 BDF HOS BN
Fax. : 0973 - 669166
Cable : DEFFA'A

قوة دفاع البحرين
الخدمات الطبية
ص.ب ٢٨٧٤٣ - البحرين
تلفون ٦٦٣٣٦٦
تلكس : ٨٨٨١ بي دي إف هوز بي ان
تلفاكس ٦٦٩١٦٦ - ٠٩٧٣
برقياً : دفاع

12 DEC 1994

HD/MOH/94/v

Ref.: 12th December 1994 الرقم

Date : التاريخ

Dr. Fariba Al Darzi
Director of Training
Ministry of Health
Post Box 12
Bahrain.

Dear Dr. Al Darazi

This is with reference to your letter dated 26th October 1994 addressed to our Director of Meidcal Services, Maj. General. Mohammed Al Khalifa.

The Director did forward your request for getting permission to conduct dissertation research in favour of Miss Mouza Suwalleh.

I have asked the Acting Principal Nursing Officer to arrange this and she already informed the concerned department (Kidney Dialysis Unit) and Miss Mouza Suwalleh can start her research work any time according to her convenience. Please ask Miss Mouza to contact Maj. Mariam Saeed (Acting Principal Nursing Officer) and then she can give more information about her attachment in the concerned department to conduct the research work.

Thanking you,

Yours sincerely,

Col. Essa Amin
Hospital Director

cc: Maj. General. Mohammed Al Khalifa, for inf.
Maj. Mohammed Al Mannai - for inf.
Maj. Mariam Saeed - for necessary action.

## Appendix B

Introductory Letter and Information Sheet

(English and Arabic Versions)

## Introductory letter

Dear potential participants,

My name is Mouza Suwaileh. I am a nurse and a doctoral candidate in Nursing at The University of Texas at Austin. In my dissertation, I will study how hemodialysis affects an individual's quality of life. I am interested in how hemodialysis affects your life personally, what kinds of social support you receive, and some of the coping methods you use to manage the stressors of your kidney disease and the treatment.

I invite you to participate in this study. Your participation includes an interview which will be conducted at your convenience and at a place of your choice. If you are interested in participating in this study, please submit your name to the unit supervisor. You will be provided with more information about the study on the day of the interview.

Thank you for your cooperation. Your response to this invitation is highly appreciated.

Yours truly,

Mouza Suwaileh

Muharraq 208,
Road # 845
House # 1676
Bahrain.
Phone # 343354

## Information sheet

Title of study: The relationship among social support, coping methods, and quality of life in adult Bahraini clients on maintenance hemodialysis.

Dear participants,

You are invited to participate in a study of how hemodialysis affects clients' lives, their social support systems, and what they do to manage the stressors of kidney disease and hemodialysis. You are invited to be in this study because you are currently on hemodialysis and indicated your willingness to participate in the study. I am a doctoral student at The University of Texas at Austin (USA), School of Nursing. I will be conducting this study as part of my Ph.D. requirements. I hope to learn more about how kidney diseases and hemodialysis affect the quality of life of persons on hemodialysis, their support systems, and ways in which they cope with kidney disease and the treatment. Approximately 85 clients are being asked to participate in the study.

If you decide to participate in the study, you will be interviewed for approximately 45 minutes about your experience with hemodialysis, how this experience affects your life, how you cope, and what kinds of social support you receive from your social network. The interview will be scheduled at a time and place convenient to you.

There will be no discomfort or risk to you or your family other than the investment of your time and the possibility of becoming tired during the interview. If you become tired, we may stop the interview and resume it when you feel able. Although this research will have no direct benefit to you, its findings may help nurses and other health care providers gain better understanding of the effects of hemodialysis on clients' lives, what kind of social support needed by these clients, how to help them cope with chronic illness on prolonged modes of therapy, and suggest feasible methods to lessen the stress experienced by hemodialysis clients.

Your confidentiality will be respected at all times. A code number will be assigned to each participant to record and analyze data, and your name will not appear on the questionnaire. Any information that is obtained in connection with this study and that can be identified with you will remain

confidential and will be disclosed only with your permission. The results of the study will be reported on a group basis, and there is no way of associating individual responses with a particular person. The list linking names to code numbers will be kept by the investigator in a locked cabinet and will be destroyed when the study is completed.

Your decision whether or not to participate in the study will not affect your future relations with The University of Texas at Austin or any other health care providers or agency. You have the right to withdraw at any point in the study without risk.

There is no reimbursement, or direct benefit to you for your participation in the study. Your agreement to the conditions described in this informational letter and oral assent will be taken as a proof of your willingness to participate in the study and to use the information for the described purpose of this study.

The addresses and telephone numbers of the investigator and the chair of my dissertation committee are provided below to facilitate contact between you and the investigator and to give you the opportunity to ask questions before, during, or after the completion of the study.

Mouza Suwaileh, M.S.N., R.N.
Muharraq 208
Road # 845
House # 1676
Bahrain Phone 343354

OR

Alexa Stuifbergen, Ph.D., R.N.
The University of Texas
at Austin, School of Nursing
1700 Red River
Austin, Texas 78705
Phone (512) 471-7311

If you would like to keep this information sheet, you may.
Thank you for your interest and participation in the study, and for the time you invest in the interview.

**Introductory Letter and Information Sheet (Arabic Version)**

**رسالـــة مبـــدئيـــة**

أعزائي المشتركين في هذا البحث.

أسمي موزه صويلح وأنا ممرضة ومرشحة للحصول على درجة الدكتوراه في التمريض من جامعة تكساس بأوستن في الولايات المتحدة الامريكية. في خلال رسالتي للدكتوراه سأقوم بدراسة تأثير العلاج عن طريق الغسل الكلوي على نوعية الحياة التي يحياها مرضى الغسيل الكلوي المزمن والذين يعالجون حاليا عن طريق الغسيل الكلوي. أنا مهتمة بالتأثيرات التي تحدث أو حدثت في حياتك شخصيا كشخص يعالج بهذا النوعع من العلاج، ما هي وسائل الدعم التي تحصل عليها وبعض الطرق التي تستعملها للتغلب على الضغوط النفسية التي تعاني منها نتيجة للمرض والعلاج.

أنا أدعوك للمشاركة في هذا البحث. مشاركتك في هذا البحث تتضمن اجراء مقابلة معك حسب الوقت والمكان الذي بناسبك اذا أردت المشاركة في هذا البحث الرجاء اعطاء اسمك لمسئولة القسم. ستحصل على مزيد من المعلومات عن هذا البحث في يوم المقابلة.

شكرا على تعاونكم وتجاوبكم.

التوقيع

موزه صويلح
المحرق ٢٠٨
طريق ٨٤٥
منزل ١٦٧٦
البحرين
ت:٣٤٣٣٥٤

## معلومـــات عـــن الدراسة

**عنوان الدراسة :**

العلاقة بين وسائل الدعم الاجتماعي ، طرق التغلب على المشاكل، ونوعية الحياة التي يعيشها المرضى البحرينيين الذين يعالجون عن طريق الكلية الصناعية.

**أعزائي المشاركين في هذا الدراسة:**

أنت مدعو للمشاركة في هذا البحث والذي يدرس تأثير العلاج عن طريق جهاز الكلية الصناعية في حياة المرضى المصابين بالفشل الكلوي. وكذلك تأثير وسائل الدعم الاجتماعي وماذا يفعل هؤلاء المرضى للتغلب على الضغوط النفسية الناتجة عن المرضى وطريقة العلاج.

أنت مدعو للمشاركة في هذا الدراسة لأنك تعالج عن طريق جهاز الكلية الصناعية وأبديت رغبتك للمشاركة في هذا الدراسة.

أنا طالبة دكتوراه في جامعة تكساس بأوستن (الولايات المتحدة الامريكية) مدرسة التمريض. سأقوم بهذه الدراسة كجزء من متطلبات الحصول على درجة الدكتوراه. من خلال هذه الدراسة أتمنى الحصول على معلومات عن تأثير مرضى الفشل الكلوي ولعلاج عن طريق جهاز الكلية الصناعية على نوعية الحياة التي يعيشها مرضى الفشل الكلوي ووسائل الدعم الاجتماعي التي يحصلون عليها وكذلك طريق التغلب على المصاعب والضغوط النفسية الناتجة عن الفشل الكلوي وطريقة علاجه. سيشارك في هذا الدراسة حوالي ٨٥ شخصا من المرضى الذين يعالجون عن طريق جهاز الكلية الصناعية.

إذا قررت المشاركة في هذا البحث، سأقوم بأجراء مقابلة معك تستغرق حوالي ٦٠ دقيقة وتتضمن هذه المقابلة أسئلة عن تجربتك مع العلاج عن طريق جهاز الكلية الصناعية وكيف أثرت هذه التجربة على حياتك وكيف تتغلب على المصاعب والضغوط النفسية وما نوع وسائل الدعم الاجتماعي والمساعدات التي تحصل عليها من قبل المحيطين بك. سترتب المقابلة حسب الوقت والمكان المناسبين لك.

لا يوجد هناك تعب أو خطر لك ولعائلتك مـا عدا الوقت الذي تقضيه في المقابلة حيث هناك احتمال بأن تشعر بالتعب خلال المقابلة. إذا شعرت بالتعب سنتوقف عن طرح الأسئلة وسنعود مرة ثانية عندما تشعر بالراحة بعد ذلك. على الرغم من أن هذا البحث لا يعطيك فائدة مباشرة ولكن نتائج هذا الدراسة ستساعد الممرضين والممرضات وغيرهم من العاملين في المجال الصحي في فهم ومعرفة التأثيرات الناتجة عن العلاج عن طريق جهاز الكلية الصناعية في حياة هؤلاء المرضى وما نوع الدعم الاجتماعي الذي يحتاجونه وكيف نساعدهم للتغلب على مشاكل المرضى المزمن والعلاج من خلال ذلك بالإمكان اقتراح بعض الطرق التي تساعد هؤلاء المرضى في التغلب على الضغوط النفسية التي يعاني منها هؤلاء المرضى.

ستكون جميع المعلومات التي تدلى بها سرية ولن تعطى لأي شخص إلا بتصريح شخصي منك. سيعطى كل مشارك في هذا البحث رقما وذلك لتدوين المعلومات وتحليلها ولن يظهر أسمك على هذا الاستبيان. ستكتب نتائج الدراسة على أساس أن جميع المشاركين في الدراسة مجموعة واحدة ولن يكون هناك وسيلة لربط المعلومات المدونة في الاستبيان بالأشخاص الذين ادلو بالمعلومات. ستحتفظ الباحثة بالقائمة التي تربط المعلومات بالأشخاص في مكان أمين وستمزق هذه القائمة بعد تكملة الدراسة.

قرارك بالمشاركة أو عدم المشاركة في هذه الدراسة لن يؤثر على علاقتك بجامعة تكساس أو أي من العاملين في المجال الصحي أو أي جهة من الجهات الصحية. لك الحق في الانسحاب من الدراسة في أي وقت بدون أي خطورة. لا يوجد هناك تعويض أو فائدة مباشرة من مشاركتك في هذه الدراسة. موافقتك على ما جاء ذكره في هذه الرسالة سيكون بمثابة إبداء رغبتك في المشاركة في هذا البحث استعمال المعلومات لتحقيق الهدف من هذا البحث.

مدون أدناه عناوين وأرقام الباحثة والمشرفة على هذه الدراسة لتسهيل الاتصال بالباحثة ولإعطائك الفرصة لطرح أية أسئلة لديك قبل خلال وبعد تكملة هذه الدراسة.


اليكسا ستايفبرجن او موزه صويلح

جامعة تكساس باوستن المحرق ٢٠٨

مدرسة التمريض طريق ٨٤٥

١٧٠٠ رد ريفر منزل ١٦٧٦

اوستن- تكساس ٧٨٧٠٥ ت: ٣٤٣٣٥٤

ت:٤٧١٧٣١١ (٥١٢)

## Appendix C

Data Collection Instruments

(English and Arabic Versions)

Code #_____

## SOCIAL SUPPORT RESOURCE QUESTIONNAIRE

The following situation deals with social support resources that individuals turn to for help. I will read the situation and then I will ask you to questions related to that particular situation

**If you encounter (based on your perception) a serious problem related to your job (i.e. problems with CO-workers, or employers, overworked, low salary), family (i.e. problems in relationships with spouse or significant others; financial problems), or even personal problems (i.e. loneliness, physical problems), or any other problem you think of. Please tell me**

a. Whom would you turn to for help (Please tell me all that apply)?

1 PARENT
2 CHILD OR CHILDREN
3 SPOUSE OR PARTNER OR SIGNIFICANT OTHERS
4 A RELATIVE OR FAMILY MEMBER
5 FRIEND
6 NEIGHBOR OR CO-WORKER
7 SPIRITUAL LEADER
8 PROFESSIONAL (nurse, counselor, social worker, employer, etc.)
9 NO ONE (No one available)
10 NO ONE (Prefer to handle it alone)
11 OTHER (Please explain) _____

How satisfied were you with the help you received?

1 VERY DISSATISFIED
2 FAIRLY DISSATISFIED
3 A LITTLE DISSATISFIED
4 A LITTLE SATISFIED
5 FAIRLY SATISFIED
6 VERY SATISFIED

Code#_____

## PERSONAL RESOURCE QUESTIONNAIRE Part II (PRQ 85)

Below are some statements with which some people agree and others disagree. I will read each statement and please tell me the response most appropriate for you. There is no right or wrong answer.

**1= STRONGLY DISAGREE**
**2= DISAGREE**
**3= SOMEWHAT DISAGREE**
**4= NEUTRAL**
**5= SOMEWHAT AGREE**
**6= AGREE**
**7= STRONGLY AGREE**

**STATEMENTS**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| a. | There is someone I feel close to who makes me feel secure | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| b. | I belong to a group in which I feel important | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| c. | People let me know that I do well at my work (job, homemaking) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| d. | I can't count on my relatives and friends to help me with my problems | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| e. | I have enough contact with the person who makes me feel special | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| f. | I spend time with others who have the same interest that I do | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**STATEMENTS**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| g. | There is little opportunity in my life to be giving and caring to another person | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| h. | Others let me know that they enjoy working with me (job, committees, projects) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| i. | There are people who are available if I needed help over an extended period of time | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| j. | There is no one to talk to about how I am feeling | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| k. | Among my group of friends we do favors for each others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| l. | I have the opportunity to encourage others to develop their interests and skills | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| m. | My family lets me know that I am important for keeping the family running | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| n. | I have relatives or friends that will help me out even if I can't pay them back | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| o. | When I am upset there is someone I can be with who lets me be myself | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | STATEMENTS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| p. | I feel no one has the same problems as I | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| q. | I enjoy doing little "extra" things that make another person's life more pleasant | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| r. | I know that others appreciate me as a person | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| s. | There is someone who loves and cares about me | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| t. | I have people to share social events and fun activities with | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| u. | I am responsible for helping provide for another person's needs | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| v. | If I need advice there is someone who would assist me to work out a plan for dealing with the situation | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| w. | I have a sense of being needed by another person | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| x. | People think that I'm not as good a friend as I should be | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| y. | If I got sick, there is someone to give me advice about caring for myself | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

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Code #_____

**The modified version of Part A of the Jalowiec Coping Scale**

This questionnaire is about how you cope with stress and tension, and what you do to handle stressful situations. In particular, I am interested in how you have coped with the stress of:

---

This questionnaire lists different ways of coping with stress. Some people use a lot of different coping methods; some people use only a few. You will be asked the following question about each different way of coping with stress.

**How often have you used that coping method to handle the stress listed above?**

I will read each coping method listed in this questionnaire, please tell me how often you have used that method to cope with the stress of being on hemodialysis. Your answer will be one on the following responses.

0 = never used
1 = seldom used
2 = sometimes used
3 = often

| Coping Methods | Part A<br>How often have you used each coping methods? | | | |
|---|---|---|---|---|
| 1. Worried about the problem | 0 | 1 | 2 | 3 |
| 2. Hoped that things would get better | 0 | 1 | 2 | 3 |
| 3. Ate or smoked more than usual | 0 | 1 | 2 | 3 |
| 4. Thought out different ways to handle the situation | 0 | 1 | 2 | 3 |
| 5. Told yourself that things could be much worse | 0 | 1 | 2 | 3 |

| Coping Methods | Part A<br>How often have you used each coping methods? | | | |
|---|---|---|---|---|
| 6. Exercised or did some physical activity | 0 | 1 | 2 | 3 |
| 7. Tried to get away from the problem for a while | 0 | 1 | 2 | 3 |
| 8. Got mad and let off steam | 0 | 1 | 2 | 3 |
| 9. Expected the worst that could happen | 0 | 1 | 2 | 3 |
| 10. Tried to put the problem out of your mind and think of something else | 0 | 1 | 2 | 3 |
| 11. Talked the problem over with family of friends | 0 | 1 | 2 | 3 |
| 12. Accepted the situation because very little could be done | 0 | 1 | 2 | 3 |
| 13. Tried to look at the problem objectively and see all sides | 0 | 1 | 2 | 3 |
| 14. Daydreamed about a better life | 0 | 1 | 2 | 3 |
| 15. Talked the problem over with a professional person (such as a doctor, nurse, religious leader, teacher, counselor) | 0 | 1 | 2 | 3 |
| 16. Tried to keep the situation under control | 0 | 1 | 2 | 3 |
| 17. Prayed or put your trust in God | 0 | 1 | 2 | 3 |
| 18. Tried to get out of the situation | 0 | 1 | 2 | 3 |
| 19. Kept your feelings to yourself | 0 | 1 | 2 | 3 |
| 20. Told yourself that the problem was someone else's fault | 0 | 1 | 2 | 3 |
| 21. Waited to see what would happen | 0 | 1 | 2 | 3 |
| 22. Wanted to be alone to think things out | 0 | 1 | 2 | 3 |

| Coping Methods | Part A<br>How often have you used each coping methods? | | | |
|---|---|---|---|---|
| 23. Resigned yourself to the situation because things looked hopeless | 0 | 1 | 2 | 3 |
| 24. Took out your tensions on someone else | 0 | 1 | 2 | 3 |
| 25. Tried to change the situation | 0 | 1 | 2 | 3 |
| 26. Used relaxation techniques | 0 | 1 | 2 | 3 |
| 27. Tried to find out more about the problem | 0 | 1 | 2 | 3 |
| 28. Slept more than usual | 0 | 1 | 2 | 3 |
| 29. Tried to handle things one step at a time | 0 | 1 | 2 | 3 |
| 30. Tried to keep your life as normal as possible and not let the problem interfere | 0 | 1 | 2 | 3 |
| 31. Thought about how you had handled other problems in the past | 0 | 1 | 2 | 3 |
| 32. Told yourself not to worry because everything would work out fine | 0 | 1 | 2 | 3 |
| 33. Tried to work out a compromise | 0 | 1 | 2 | 3 |
| 34. Let time take care of the problem | 0 | 1 | 2 | 3 |
| 35. Tried to distract yourself by doing something that you enjoy | 0 | 1 | 2 | 3 |
| 36. Told yourself that you could handle anything no matter how hard | 0 | 1 | 2 | 3 |
| 37. Set up a plan of action | 0 | 1 | 2 | 3 |
| 38. Tried to keep a sense of humor | 0 | 1 | 2 | 3 |
| 39. Put off facing up to the problem | 0 | 1 | 2 | 3 |
| 40. Tried to keep your feelings under control | 0 | 1 | 2 | 3 |

| Coping Methods | Part A<br>How often have you used each coping methods? | | | |
|---|---|---|---|---|
| 41. Talked the problem over with someone who had been in a similar situation | 0 | 1 | 2 | 3 |
| 42. Practiced in your mind what had to be done | 0 | 1 | 2 | 3 |
| 43. Tried to keep busy | 0 | 1 | 2 | 3 |
| 44. Learned something new in order to deal with the problem | 0 | 1 | 2 | 3 |
| 45. Thought about the good things in your life | 0 | 1 | 2 | 3 |
| 46. Tried to ignore or avoid the problem | 0 | 1 | 2 | 3 |
| 47. Compared yourself with other people who were in the same situation | 0 | 1 | 2 | 3 |
| 48. Tried to think positively | 0 | 1 | 2 | 3 |
| 49. Blamed yourself for getting into such a situation | 0 | 1 | 2 | 3 |
| 50. Preferred to work things out yourself | 0 | 1 | 2 | 3 |
| 51. Tried to see the good side of the situation | 0 | 1 | 2 | 3 |
| 52. Told yourself that this problem was really not that important | 0 | 1 | 2 | 3 |
| 53. Avoided being with people | 0 | 1 | 2 | 3 |
| 54. Tried to improve yourself in some ways so you could handle the situation better | 0 | 1 | 2 | 3 |
| 55. Wished that the problem would go away | 0 | 1 | 2 | 3 |
| 56. Depend on others to help you out | 0 | 1 | 2 | 3 |
| 57. Told yourself that you were just having some bad lack | 0 | 1 | 2 | 3 |

**If there are any other things you did to handle the stress mentioned at the beginning, that are not on this list, please tell me those coping methods and how often you have used each coping method.**

| | | | |
|---|---|---|---|
| 58. | 1 | 2 | 3 |
| 59. | 1 | 2 | 3 |
| 60. | 1 | 2 | 3 |

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**Code #_____**

## Cantril's Ladder

This ladder measures how people perceive their quality of life. Please look at this ladder and think about the best possible life that you could expect to have as being on the top of the ladder, and the worst possible life that you could expect to have as being at the bottom of the ladder. Then answer the following two questions:

---------- 10

---------- 9

---------- 8

---------- 7

---------- 6

---------- 5

---------- 4

---------- 3

---------- 2

---------- 1

---------- 0

Question 1: Indicate on the ladder the point at which you perceive your quality of life now and just before you were started on dialysis treatment?

Question 2: What are the reasons do you have for putting yourself at this point on the ladder?

Code #_____

## Demographic Data Questionnaire

1. Sex: Male _____
   Female _____

2. How old are you? _____

3. Are you:
   1. Single _____
   2. Married _____
   3. Divorced _____
   4. Widowed _____

4. If not single, how many children do you have? _____

5. How old are they? _____

6. How many dependents:
   Living in your household? _____
   Living outside your household? _____

7. What is the highest grade you have completed at school?
   1. None _____
   2. 1 to 6th grade _____
   3. 7th to 9th grade _____
   4. 10th to 12th grade _____
   5. College degree _____
   6. Graduate degree _____
   7. Others _____

8. Are you employed?
   1. Yes
   2. No

9. If employed, what is your occupation? _____

10. If not employed, What do you do for living?

_____

11. How long have you been on dialysis? (months)

_____

12. Are you under treatment for any other condition (s) ?
    1. Yes
    2. No

13. If yes, what condition is it?

_____

14. When did you first diagnosed with ESRD?_____

15. Have you noticed any changes in your social interactions with others and physical health and activities since you started the treatment of hemodialysis?
    1. Yes
    2. No

16. If yes, please answer questions 17 through 19

17. Explain these changes:

_____

18. What do you think the most troublesome change that affected your life since you have been started on hemodialysis?

_____

19. How did you deal with it?

---

20. Is there anything else you would like to tell me about what helps you manage the stressors related to hemodialysis?

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**Data Collection Instruments (Arabic Version)**

رقم التسلسل :  بدأت المقابلة الساعة -- صباحا -- مســـاءا

التاريخ :  انتهت المقابلة الساعة -- صباحا -- مساء

الوقت الذي استغرقته المقابلة بالدقائق ---- دقيقة

# دراسة حول دور مصادر الدعم الاجتماعية وطرق التغلب على المصاعب و الضغوط النفسية في نوعية حياة المريض الذي يعالج عن طريق جهاز الكلية الصناعية

**إعداد : موزه عبدالله صويلم**

## ملاحظة :

قبل البدء بالمقابلة يجب التأكد من توفر الشروط الآتية فى الشخص المراد إجراء المقابلة معه :

١ - يبلغ من العمر ١٨ سنة فما فوق .

٢ - يتكلم اللغة العربية .

٣ - لا يتلقى أي علاج نفسي في الوقت الحاضر .

## استبيان مصادر الدعم الاجتماعية

تبين هذه الحالة بعض مصادر الدعم الاجتماعية التي يلجأ إليها الناس لطلب المساعدة. سأقوم بقراءة هذه الحالة وسأسألك سؤالين متعلقين بهذه الحالة.

إذا واجهت مشكلة كبيرة (حسب وجهة نظرك) تتعلق بعملك (مثل مشاكل مع زملاؤك في العمل، رئيسك في العمل، زيادة في ساعات العمل، أو قلة الراتب)، مشاكل عائلية (مثل مشاكل مع علاقاتك مع أفراد أسرتك، أو مشاكل مالية) أو حتى مشاكل شخصية (مثل إحساسك بالوحدة، مشاكل صحية) أو أية مشاكل أخرى من أي نوع

أ - إلي من تتجه لطلب المساعدة ( اذكر كل ما ينطبق عليك ) .

١ - أحد الوالدين

٢ - الأولاد / البنات

٣ - الزوج / الزوجة

٤ - أحد الأقارب

٥ - صديق \ صديقة

٦ - أحد الجيران أو أحد زملاء العمل

٧ - رجل دين

٨ - أحد الأشخاص المحترفين ( ممرض \ممرضة ، مرشد ، أخصائي اجتماعي، إلى آخره )

٩- لا أحد ( لا يوجد أحد للمساعدة )

١٠ - لا أحد ( أفضل أن أتغلب على المشكلة بنفسي )

١١- أشخاص آخرون ( الرجاء ذكر هؤلاء الأشخاص ) ----------

ب – ما مدى رضائك عن المساعدة التي حصلت عليها ؟

١ – غير راض بتاتا

٢ – غير راض نوعا ما

٣ – غير راض قليلا

٤ – راض قليلا

٥ – راض نوعا ما

٦ – راض تماما

# استبيان المصادر الشخصية

## الجزء الثاني:

السؤال التالي يتكون من عدة نقاط يتفق عليها البعض ويختلف عليها البعض الآخر . سأقوم بقراءة النقاط التالية والرجاء الإجابة على كل نقطة بأحد الأجوبة التالية والتي تعتقد أنها تناسبك . لا يوجد جواب صحيح أو خاطئ .

١ - لا أوافق بشدة

٢ - لا أوافق

٣ - لا أوافق نوعا ما

٤ - محايد

٥ - أوافق نوعا ما

٦ - أوافق

٧ - أوافق بشدة

| الرقم | النقاط | |
|---|---|---|
| ١ - | هناك شخص أشعر بالقرب منه ويجعلني أشعر بالأمان. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٢ - | أنتمي إلى مجموعة تشعرني بأنني مهم. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٣ - | يخبرني الناس أنني أقوم بعمل جيد.(في البيت، العمل) | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٤ - | لا أعتمد على أقاربي وأصدقائي لمساعدتي في حل مشاكلي. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٥ - | أكون على اتصال كاف بالشخص الذي يجعلني أشعر بأنني مهم (خاص). | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٦ - | أقضي وقت كاف مع الأشخاص الذين لديهم نفس اهتماماتي. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٧ - | هناك فرص قليلة في حياتي لأعطي وأعتني بشخص آخر. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |

| | | |
|---|---|---|
| ٨ - | يخبرني زملائي بأنهم يستمتعون بالعمل معي. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٩ - | هناك أشخاص متواجدين لمساعدتي إذا احتجت للمساعدة لفترة زمنية طويلة. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ١٠ - | لا يوجد أحد أتكلم معه عما أشعر به. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ١١ - | بين مجموعة أصدقائي يقوم البعض بخدمة الآخر. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ١٢ - | لدي الفرصة لتشجيع الآخرين في تطوير اهتماماتهم ومهاراتهم. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ١٣ - | تشعرني عائلتي بأنني مهم في لم شمل الأسرة. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ١٤ - | لدي أقارب وأصدقاء مستعدون لمساعدتي حتى إذا لم أستطع أن أرد لهم الجميل (المساعدة). | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ١٥ - | عندما أكون غضبان هناك من يكون بجانبي ويجعلني أتصرف كما أنا. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ١٦ - | أشعر بأنه لا يوجد أحد لديه نفس مشكلتي. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ١٧ - | أستمتع بعمل أشياء صغيرة إضافية تجعل حياة شخص آخر أكثر متعة. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ١٨ - | أعرف بأن الآخرون يتقبلونني كشخص. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ١٩ - | هناك شخص يحبني ويهتم بي. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |

| | | |
|---|---|---|
| ٢٠ - | هناك أشخاص يشاركوني في المناسبات الاجتماعية والنشاطات المسلية. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٢١ - | أنا مسئول عن المساعدة في توفير احتياجات شخص آخر. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٢٢ - | إذا احتجت لنصيحة هناك من يساعدني في أيجاد خطة لمعالجة المشكلة. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٢٣ - | أشعر بأن هناك شخص يحتاج لي. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٢٤ - | يعتقد الناس بأنني لست صديق جيد كما ينبغي أن أكون. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |
| ٢٥ - | إذا مرضت، هناك من يزودني بالنصائح عن كيفية العناية بنفسي. | ١ ٢ ٣ ٤ ٥ ٦ ٧ |

## مقياس جالويك للتغلب

## على المشاكل أو المصاعب التي تواجه الإنسان

هذا الاستبيان يوضح بعض الطرق التي تساعد الإنسان في التغلب على المصاعب أو المشاكل التي تواجهه في حياته . ما يهمني في هذا الاستبيان هو معرفة الطرق التي استعملتها للتغلب على المصاعب أو المشاكل التي واجهتها نتيجة للعلاج عن طريق العلاج بجهاز الكلية الصناعية.

يحتوى هذا الاستبيان على قائمة للطرق المختلفة التي تساعد الإنسان في التغلب على المشاكل والضغوط النفسية . بعض الأشخاص يستعملون طرقا كثيرة بينما يستعمل أناس آخرون القليل منها .

في هذا الاستبيان ستسأل سؤالا واحدا عن كل طريقة من الطرق المستعملة للتغلب على المشاكل والضغوط النفسية . سأقوم بسؤالك عن :

ما مدى استعمالك لكل طريقه من طرق التغلب على المصاعب والضغوط النفسية التي سأذكرها لك ؟.

وسيكون جوابك حسب الآتي :

٠ = لم استعملها بتاتا

١ = استعملتها نادرا

٢ = استعملتها أحيانا

٣ = استعملتها غالبا

| الرقم | الطرق المستعملة للتغلب على المصاعب والضغوط النفسية | ما مدى استخدامك لكل من الطرق المستعملة للتغلب على المصاعب والضغوط النفسية | | | |
|---|---|---|---|---|---|
| ١ - | كنت قلقا بسبب المشكلة. | ٠ | ١ | ٢ | ٣ |
| ٢ - | كنت آمل بأن الظروف ستتحسن. | ٠ | ١ | ٢ | ٣ |
| ٣ - | أكلت ودخنت أكثر من المعتاد. | ٠ | ١ | ٢ | ٣ |
| ٤ - | فكرت في طرق مختلفة لمعالجة/ تدبير المشكلة. | ٠ | ١ | ٢ | ٣ |
| ٥ - | قلت لنفسك ربما كانت الظروف أسوأ بكثير. | ٠ | ١ | ٢ | ٣ |

| | | | | | |
|---|---|---|---|---|---|
| ٦ - | قمت بعمل تمارين رياضية أو نشاط جسما ني. | ٠ | ١ | ٢ | ٣ |
| ٧- | حاولت الهروب من المشكلة لفترة ما. | ٠ | ١ | ٢ | ٣ |
| ٨ - | تضايقت وانفعلت. | ٠ | ١ | ٢ | ٣ |
| ٩ - | توقعت أسوأ شئ ممكن أن يحدث. | ٠ | ١ | ٢ | ٣ |
| ١٠ - | حاولت أن تنسى المشكلة وتفكر في شئ آخر. | ٠ | ١ | ٢ | ٣ |
| ١١ - | تحدثت في المشكلة مع العائلة أو الأصدقاء. | ٠ | ١ | ٢ | ٣ |
| ١٢ - | تقبلت الوضع لأنه لا يمكن العمل إلا القليل لحل المشكلة. | ٠ | ١ | ٢ | ٣ |
| ١٣ - | حاولت النظر إلى المشكلة بموضوعية ومن جميع النواحي. | ٠ | ١ | ٢ | ٣ |
| ١٤ - | حلمت (أحلام اليقظة) بحياة أفضل. | ٠ | ١ | ٢ | ٣ |
| ١٥ - | تكلمت مع أحد هؤلاء الأشخاص بخصوص المشكلة (طبيب، ممرض/ ممرضة، رجل دين، مدرسة، مرشد). | ٠ | ١ | ٢ | ٣ |
| ١٦ - | حاولت أن تتحكم في الوضع. | ٠ | ١ | ٢ | ٣ |
| ١٧ - | صليت وتوكلت على الله. | ٠ | ١ | ٢ | ٣ |
| ١٨ - | حاولت الخروج من الوضع. | ٠ | ١ | ٢ | ٣ |
| ١٩ - | احتفظت بشعورك لنفسك. | ٠ | ١ | ٢ | ٣ |
| ٢٠ - | قلت لنفسك أن المشكلة حدثت بسبب خطأ من شخص ما. | ٠ | ١ | ٢ | ٣ |
| ٢١ - | انتظرت لترى ماذا سيحدث. | ٠ | ١ | ٢ | ٣ |

| | | | | | |
|---|---|---|---|---|---|
| ٢٢ - | أردت أن تكون لوحدك لتفكر في المشكلة. | ٠ | ١ | ٢ | ٣ |
| ٢٣ - | عشت في المشكلة لأنه لا يوجد لديك أمل. | ٠ | ١ | ٢ | ٣ |
| ٢٤ - | عكست ضغوطك النفسية على شخص آخر. | ٠ | ١ | ٢ | ٣ |
| ٢٥ - | حاولت تغيير الوضع. | ٠ | ١ | ٢ | ٣ |
| ٢٦ - | استعملت طرق الاسترخاء. | ٠ | ١ | ٢ | ٣ |
| ٢٧ - | حاولت البحث عن معلومات أكثر بخصوص المشكلة. | ٠ | ١ | ٢ | ٣ |
| ٢٨ - | نمت أكثر من المعتاد. | ٠ | ١ | ٢ | ٣ |
| ٢٩ - | حاولت معالجة المشكلة خطوة بخطوة. | ٠ | ١ | ٢ | ٣ |
| ٣٠ - | حاولت أن تسير حياتك على طبيعتها وعدم جعل المشكلة تتدخل في مسار حياتك الطبيعية. | ٠ | ١ | ٢ | ٣ |
| ٣١ - | فكرت في طرق معالجة مشاكل أخرى استعملتها في الماضي. | ٠ | ١ | ٢ | ٣ |
| ٣٢ - | قلت لنفسك يجب ألا أتضايق لأن كل شئ سيكون على ما يرام. | ٠ | ١ | ٢ | ٣ |
| ٣٣ - | حاولت التعويض بشيء آخر. | ٠ | ١ | ٢ | ٣ |
| ٣٤ - | جعلت الوقت كوسيلة لحل المشكلة. | ٠ | ١ | ٢ | ٣ |
| ٣٥ - | حاولت القيام بعمل شئ آخر تستمتع به. | ٠ | ١ | ٢ | ٣ |
| ٣٦ - | قلت لنفسك أنك تستطيع أن تعالج أية مشكلة مهما كانت صعوبتها. | ٠ | ١ | ٢ | ٣ |
| ٣٧ - | وضعت خطة عملية. | ٠ | ١ | ٢ | ٣ |

| | | | | | |
|---|---|---|---|---|---|
| ٣٨- | حاولت أن تكون مرحا. | ٠ | ١ | ٢ | ٣ |
| ٣٩ - | تغاضيت عن مواجهة المشكلة. | ٠ | ١ | ٢ | ٣ |
| ٤٠- | حاولت أن تتحكم في شعورك | ٠ | ١ | ٢ | ٣ |
| ٤١- | تحدثت عن المشكلة مع شخص آخر في نفس الوضع. | ٠ | ١ | ٢ | ٣ |
| ٤٢ - | تدربت في مخيلتك عما يجب عمله. | ٠ | ١ | ٢ | ٣ |
| ٤٣ - | حاولت أن تكون مشغولا. | ٠ | ١ | ٢ | ٣ |
| ٤٤ - | تعلمت شيئا جديد لمحاولتك في التغلب على المشكلة. | ٠ | ١ | ٢ | ٣ |
| ٤٥ - | فكرت في الأشياء الجميلة في حياتك. | ٠ | ١ | ٢ | ٣ |
| ٤٦ - | حاولت جهل أو تجنب المشكلة. | ٠ | ١ | ٢ | ٣ |
| ٤٧ - | قارنت نفسك بالأشخاص الذين يعيشون في نفس الوضع الذي تعيش فيه. | ٠ | ١ | ٢ | ٣ |
| ٤٨ - | حاولت التفكير بطريقة إيجابية. | ٠ | ١ | ٢ | ٣ |
| ٤٩ - | لمت نفسك لوقوعك في هذه المشكلة. | ٠ | ١ | ٢ | ٣ |
| ٥٠ - | فضلت أن تتغلب على المشكلة بنفسك. | ٠ | ١ | ٢ | ٣ |
| ٥١ - | حاولت رؤية الجانب الجيد من المشكلة. | ٠ | ١ | ٢ | ٣ |
| ٥٢ - | قلت لنفسك أن هذه المشكلة ليست مهمة إلى هذه الدرجة. | ٠ | ١ | ٢ | ٣ |
| ٥٣ - | تجنبت الجلوس مع الناس. | ٠ | ١ | ٢ | ٣ |
| ٥٤ - | حاولت تحسين نفسك في بعض الجوانب حتى تستطيع أن تتغلب على الوضع بطريقة أفضل. | ٠ | ١ | ٢ | ٣ |
| ٥٥ - | تمنيت أن تنتهي المشكلة. | ٠ | ١ | ٢ | ٣ |

| | | | | | |
|---|---|---|---|---|---|
| ٥٦ - | اعتمدت على الغير لمساعدتك. | ٠ | ١ | ٢ | ٣ |
| ٥٧ - | قلت لنفسك أن ما حدث لك مجرد سوء حظ. | ٠ | ١ | ٢ | ٣ |

---

إذا كانت لديك أية طرق أخرى استعملتها للتغلب على الضغوط النفسية الناتجة عن عملية العلاج بجهاز الكلية الصناعية والتي لم تذكر في هذه القائمة، الرجاء ذكرها وذكر مدى استعمالها.

| | | | | |
|---|---|---|---|---|
| ٥٨ - | | ١ | ٢ | ٣ |
| ٥٩ - | | ١ | ٢ | ٣ |
| ٦٠- | | ١ | ٢ | ٣ |

# سلم قياس قيمة الحياة النوعية

## إرشادات :

السلم الذي أمامك يقيس تقيم الناس للحياة التي يعيشونها تقيما نوعيا من حيث المشاكل التي واجهتها منـد بداية تشخيصك بمرض الفشل الكلوي .

الرجاء النظر إلى هذا السلم وأريدك أن تفكر في أحسن حياة ممكن أن تعيشها . تصور أن الحياة في أعلى السلم ثم فكـر في أسوأ حياة ممكن أن تعيشها . تصور أن هذه الحياة في أسفل السلم . وسأقوم بسؤالك السؤالين الآتيين :

القيمة النوعية للحياة

١٠ ------

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صفر------

**السؤال الأول :** كيف تقيم قيمة حياتك النوعية كما تتصورها في الوقت الحاضر وقبل أن تبدأ العلاج بجهاز الكلية الصناعية ؟

**السؤال الثاني :** ما هي الأسباب التي جعلتك تعتقد أن هذه المواقع على السلم تشير إلى قيمة حياتك النوعية ؟

قبل:

الان:

# استبيان المعلومات الديموغرافية

١ - الجنس :

١ - ذكر

٢ - أنثى

٢ - كم عمرك :

٣ - هل أنت

١ - أعزب / عز باء

٢ - متزوج / متزوجه

٣ - مطلق / مطلقه

٤ - أرمل / أرمله

٤ - إذا لم تكن أعزب ، كم عدد أطفالك ؟----------

٥ - كم أعمارهم ؟----------

٦ - كم عدد الأشخاص الذين تعيلهم ؟ ----------

١ - الذين يعيشون في بيتك ----------

٢ - الذين يعيشون خارج بيتك ----------

٧ - ما هي أعلي مرحلة تعليمية أكملتها ؟

١ - لم أذهب إلى المدرسة بتاتا

٢ - المرحلة الابتدائية

٣ - المرحلة الاعدادية

٤ - المرحلة الثانوية

٥ - متخرج من كلية ، جامعه

٦ - مرحلة ما بعد الجامعة

٧ - شهادات أخرى ----------

٨ - هل تعمل ؟

١ - نعم

٢ - لا

٩ - إذا كنت تعمل ، ما هي مهنتك أو عملك ؟ ----------

١٠ - إذا لم تكن تعمل ، ما هي مصادر معيشتك ؟ ----------

١١ - منذ متى و أنت تعالج عن طريق العلاج بجهاز الكلية الصناعية ؟ ----------

١٢ - هل تعالج عن أي مرض آخر ؟

١ - نعم

٢ - لا

١٣ - إذا كنت تعالج من مرض آخر ، ما هو هذا المرض ؟ ----------

١٤ - متى تم تشخيصك لأول مرة بالفشل الكلوي ؟ ----------

١٥ - هل لاحظت أية تغيرات في حياتك الاجتماعية وصحتك الجسمانية ونشاطاتك منذ بدأت العلاج بجهاز الكلية الصناعية ؟

١ - نعم

٢ - لا

١٦ - إذا كانت هناك تغييرات ، اجب على الأسئلة التالية .

١٧ - اشرح هذه التغيرات

١٨ - ما هي اكثر التغيرات التي ضايقتك اكثر من غيرها منذ بدأت العلاج بجهاز الكلية الصناعية ؟

١٩ - ماذا فعلت لمعالجة هذه التغيرات ؟

٢٠- هل هناك طرق أخرى استعملتها وساعدتك في التغلب على المشاكل والمصاعب التي واجهتك نتيجة للعلاج بجهاز الكلية الصناعية؟

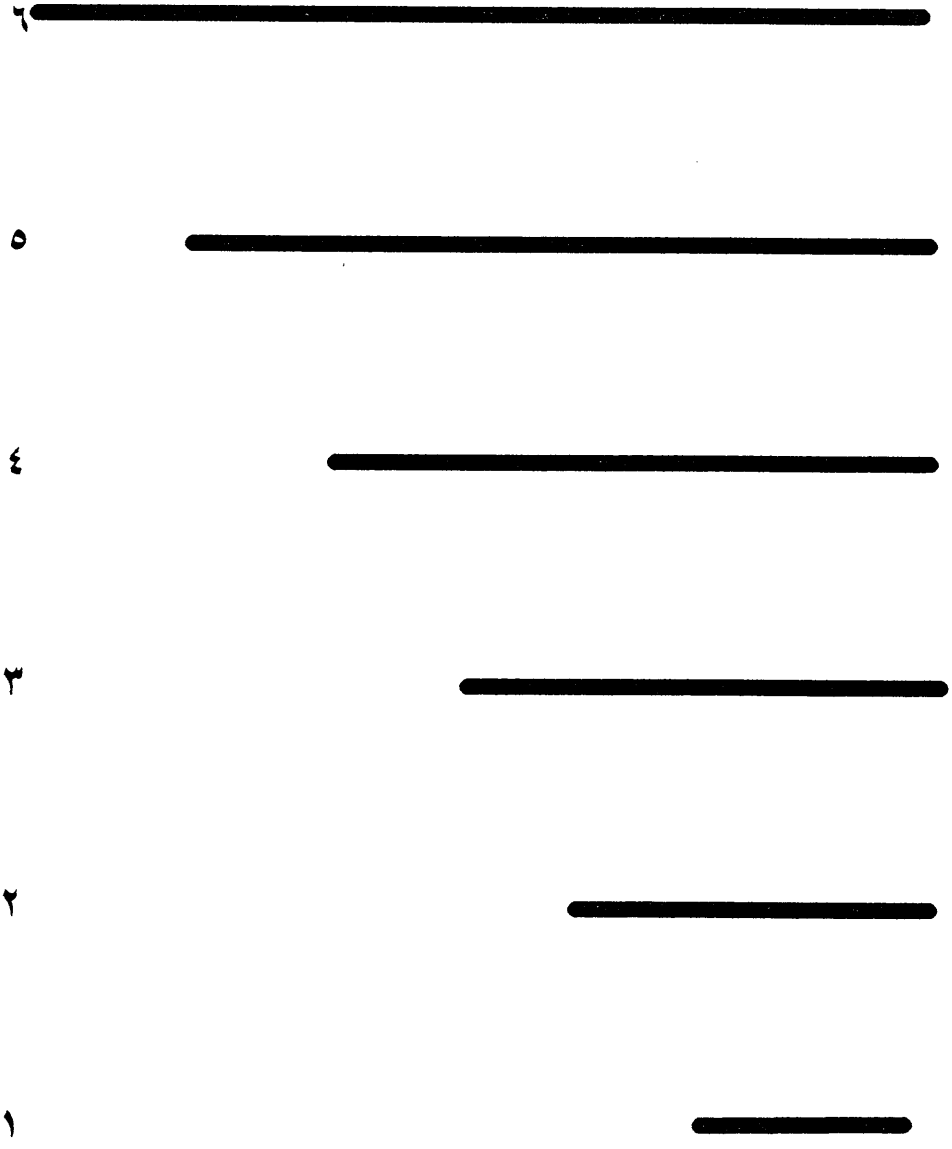
## Appendix D

Visual Analog Scales

## Visual Analog Scales (Arabic Version)

### Satisfaction with received social support

مدى رضائك عن المساعدة التي حصلت عليها



**Perceived Social Support**

مدى إحساسك بقيمة المساعدة التي تحصل عليها

**Degree of Agreement**

درجة الموافقة

٧

٦

٥

**Perceived Social Support**

مدى إحساسك بقيمة المساعدة التي تحصل عليها

**Degree of Disagreement**

درجة عدم الموافقة

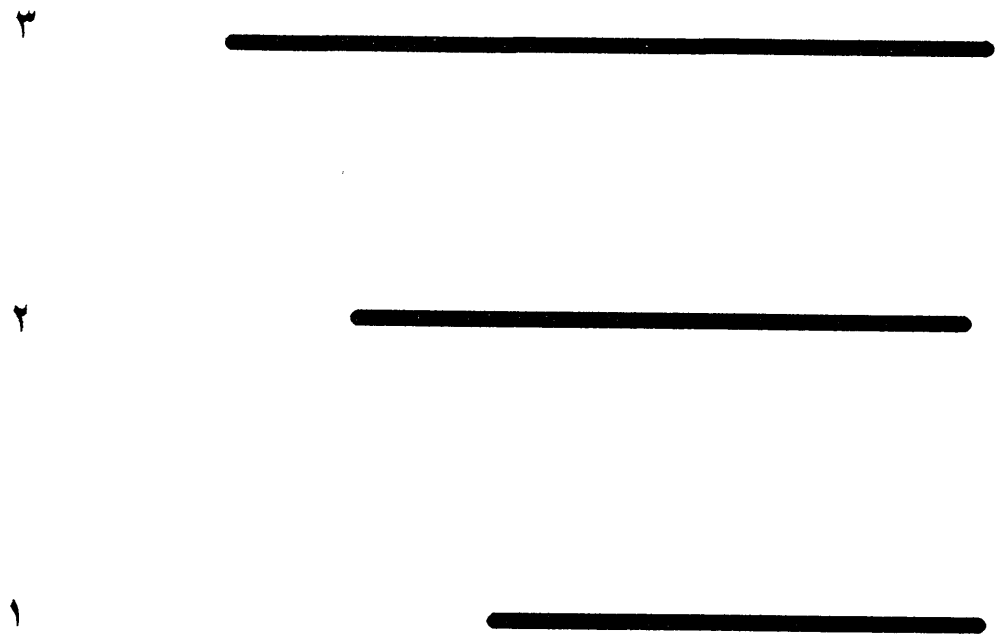
٣ ———————————————

٢ ———————————————

١ ———————————————

## Frequency of the use of coping methods

مدى استعمالك لطرق التغلب على المشاكل
و المصاعب النفسية



## Appendix E

Items Ratings for the Jalowiec Coping Scale

## Item Ratings for the Jalowiec Coping Scale

| Items | Appropriateness | | Frequency of Use | | | Categorization | | |
|---|---|---|---|---|---|---|---|---|
| | A | I | C | R | N | P | E | O |
| 1. Worried about the problem | 4 | 0 | 4 | 0 | 0 | 2 | 2 | 0 *E |
| 2. Hoped that things would get better | 4 | 0 | 4 | 0 | 0 | 1 | 3 | 0 E |
| 3. Ate or smoked more | 4 | 0 | 4 | 0 | 0 | 1 | 3 | 0 E |
| 4. Thought out different ways to handle the situation | 4 | 0 | 1 | 3 | 0 | 1 | 3 | 0 P |
| 5. Told yourself that things could be much worse | 4 | 0 | 3 | 0 | 1 | 1 | 3 | 0 E |
| 6. Exercised or did some physical activity | 4 | 0 | 2 | 2 | 0 | 0 | 1 | 3 O |
| 7. Tried to get away from the problem for a while | 4 | 0 | 1 | 3 | 0 | 0 | 3 | 1 E |
| 8. Got mad and let off steam | 3 | 1 | 3 | 1 | 0 | 1 | 3 | 0 E |
| 9. Expected the worst that could happen | 4 | 0 | 3 | 0 | 1 | 0 | 3 | 1 E |
| 10. Tried to put the problem out of your mind and think of something else | 3 | 1 | 2 | 2 | 0 | 0 | 3 | 1 E |

**Appropriateness** A= Culturally Appropriate I= Culturally Inappropriate

**Frequency of Use** C= Commonly used R= Rarely used N= Never used

**Categorization** P= Problem-oriented coping E= Emotion-oriented coping O= Others

* Ties resolved by fifth rater

| Items | Appropriateness | | Frequency of Use | | | Categorization | | |
|---|---|---|---|---|---|---|---|---|
| | A | I | C | R | N | P | E | O |
| 11. Talked the problem over | 4 | 0 | 4 | 0 | 0 | 2 | 2 | 0 *E |
| 12. Accepted the situation because very little could be done | 4 | 0 | 2 | 2 | 0 | 0 | 3 | 1 E |
| 13. Tried to look at the problem objectively and see all sides | 4 | 0 | 1 | 2 | 1 | 4 | 0 | 0 P |
| 14. Daydreamed about a better life | 3 | 1 | 1 | 1 | 3 | 0 | 3 | 1 E |
| 15. Talked the problem over with a professional person (such as a doctor, nurse, minister, teacher, counselor) | 4 | 0 | 2 | 1 | 1 | 2 | 2 | 0 *P |
| 16. Tried to keep the situation under control | 4 | 0 | 0 | 4 | 0 | 4 | 0 | 0 P |
| 17. Prayed or put your trust in God | 4 | 0 | 4 | 0 | 0 | 1 | 3 | 0 E |
| 18. Tried to get out of the situation | 3 | 1 | 3 | 1 | 0 | 3 | 1 | 0 P |
| 19. Kept your feelings to yourself | 4 | 0 | 3 | 1 | 0 | 1 | 3 | 0 E |
| 20. Told yourself that the problem was someone else's fault | 3 | 1 | 1 | 3 | 0 | 1 | 3 | 0 E |
| 21. Waited to see what would happen | 4 | 0 | 3 | 1 | 0 | 0 | 1 | 3 O |

| | | | |
|---|---|---|---|
| **Appropriateness** | A= Culturally Appropriate | I= Culturally Inappropriate | |
| **Frequency of Use** | C= Commonly used | R= Rarely used | N= Never used |
| **Categorization** | P= Problem-oriented coping | E= Emotion-oriented coping | O= Others |

* Ties resolved by fifth rater

| Items | Appropriateness | | Frequency of Use | | | Categorization | | |
|---|---|---|---|---|---|---|---|---|
| | A | I | C | R | N | P | E | O |
| 22. Wanted to be alone to think things out | 4 | 0 | 3 | 1 | 0 | 3 | 1 | 0 P |
| 23. Resigned yourself to the situation because things looked hopeless | 3 | 1 | 2 | 2 | 0 | 0 | 3 | 1 E |
| 24. Took out your tensions on someone else | 3 | 1 | 3 | 0 | 1 | 1 | 3 | 0 E |
| 25. Tried to change the situation | 4 | 0 | 3 | 1 | 0 | 4 | 0 | 0 P |
| 26. Used relaxation techniques | 3 | 1 | 1 | 0 | 3 | 0 | 1 | 3 O |
| 27. Tried to find out more about the problem | 4 | 0 | 3 | 1 | 0 | 4 | 0 | 0 P |
| 28. Slept more than usual | 3 | 1 | 1 | 3 | 0 | 0 | 3 | 1 E |
| 29. Tried to handle things one step at a time | 4 | 0 | 1 | 3 | 0 | 4 | 0 | 0 P |
| 30. Tried to keep your life as normal as possible and not let the problem interfere | 4 | 0 | 1 | 3 | 0 | 3 | 0 | 1 P |
| 31. Thought about how you had handled other problems in the past | 4 | 0 | 3 | 1 | 0 | 4 | 0 | 3 P |
| 32. Told yourself not to worry because everything would work out fine | 4 | 0 | 3 | 1 | 0 | 1 | 3 | 0 E |
| 33. Tried to work out a compromise | 4 | 0 | 1 | 2 | 1 | 2 | 0 | 2 *P |

**Appropriateness** A= Culturally Appropriate I= Culturally Inappropriate

**Frequency of Use** C= Commonly used R= Rarely used N= Never used

**Categorization** P= Problem-oriented coping E= Emotion-oriented coping O= Others

* Ties resolved by fifth rater

| Items | Appropriateness | | Frequency of Use | | | Categorization | | |
|---|---|---|---|---|---|---|---|---|
| | A | I | C | R | N | P | E | O |
| 34. Took a drink to make yourself feel better | 0 | 4 | 1 | 2 | 1 | 0 | 3 | 1 E |
| 35. Let time take care of the problem | 4 | 0 | 4 | 0 | 0 | 2 | 2 | 0 *E |
| 36. Tried to distract yourself by doing something that you enjoy | 3 | 1 | 1 | 1 | 2 | 0 | 3 | 1 E |
| 37. Told yourself that you could handle anything no matter how hard | 4 | 0 | 2 | 2 | 0 | 4 | 0 | 0 E |
| 38. Set up a plan of action | 3 | 1 | 1 | 2 | 1 | 4 | 0 | 0 P |
| 39. Tried to keep a sense of humor | 3 | 1 | 1 | 3 | 0 | 1 | 3 | 0 E |
| 40. Put off facing up to the problem | 4 | 0 | 2 | 2 | 0 | 0 | 3 | 1 E |
| 41. Tried to keep your feelings under control | 4 | 0 | 3 | 1 | 0 | 0 | 3 | 1 E |
| 42. Talked the problem over with someone who had been in a similar situation | 4 | 0 | 3 | 1 | 0 | 3 | 1 | 0 P |
| 43. Practiced in your mind what had to be done | 4 | 0 | 1 | 3 | 0 | 3 | 0 | 1 P |
| 44. Tried to keep busy | 4 | 0 | 3 | 1 | 0 | 0 | 3 | 1 E |
| 45. Learned something new in order to deal with the problem | 4 | 0 | 3 | 1 | 0 | 0 | 3 | 1 P |

| | | | |
|---|---|---|---|
| **Appropriateness** | A= Culturally Appropriate | I= Culturally Inappropriate | |
| **Frequency of Use** | C= Commonly used | R= Rarely used | N= Never used |
| **Categorization** | P= Problem-oriented coping | E= Emotion-oriented coping | O= Others |

* Ties resolved by fifth rater

| Items | Appropriateness | | Frequency of Use | | | Categorization | | |
|---|---|---|---|---|---|---|---|---|
| | A | I | C | R | N | P | E | O |
| 46. Did something impulsive or risky that you would not usually do | 1 | 3 | 0 | 1 | 3 | 2 | 0 | 2 *E |
| 47. Thought about the good things in your life | 4 | 0 | 3 | 1 | 0 | 1 | 3 | 0 E |
| 48. Tried to ignore or avoid the problem | 4 | 0 | 3 | 1 | 0 | 1 | 3 | 0 E |
| 49. Compared yourself with other people who were in the same situation | 4 | 0 | 3 | 1 | 0 | 2 | 0 | 2 *P |
| 50. Tried to think positively | 4 | 0 | 3 | 1 | 0 | 4 | 0 | 0 P |
| 51. Blamed yourself for getting into such a situation | 3 | 1 | 3 | 1 | 0 | 0 | 3 | 1 E |
| 52. Preferred to work things out yourself | 4 | 1 | 2 | 2 | 0 | 4 | 0 | 0 P |
| 53. Took medications to reduce tension | 0 | 4 | 0 | 2 | 2 | 0 | 3 | 1 E |
| 54. Tried to see the good side of the situation | 4 | 0 | 2 | 2 | 0 | 4 | 0 | 0 P |
| 55. Told yourself that this problem was really not that important | 4 | 0 | 2 | 2 | 0 | 1 | 3 | 0 E |
| 56. Avoided being with people | 4 | 0 | 2 | 2 | 0 | 0 | 3 | 1 E |

| | | | |
|---|---|---|---|
| **Appropriateness** | A= Culturally Appropriate | I= Culturally Inappropriate | |
| **Frequency of Use** | C= Commonly used | R= Rarely used | N= Never used |
| **Categorization** | P= Problem-oriented coping | E= Emotion-oriented coping | O= Others |

* Ties resolved by fifth rater

| Items | Appropriateness | | Frequency of Use | | | Categorization | | |
|---|---|---|---|---|---|---|---|---|
| | A | I | C | R | N | P | E | O |
| 57. Tried to improve yourself in some ways so you could handle the situation better | 3 | 1 | 1 | 3 | 0 | 3 | 0 | 1 P |
| 58. Wished that the problem would go away | 4 | 0 | 4 | 0 | 0 | 0 | 3 | 1 E |
| 59. Depend on others to help you out | 4 | 0 | 4 | 0 | 0 | 3 | 0 | 1 E |
| 60. Told yourself that you were just having some bad lack | 4 | 0 | 3 | 1 | 0 | 0 | 3 | 1 E |

**Appropriateness** A= Culturally Appropriate I= Culturally Inappropriate

**Frequency of Use** C= Commonly used R= Rarely used N= Never used

**Categorization** P= Problem-oriented coping E= Emotion-oriented coping O= Others

* Ties resolved by fifth rater

## Appendix F

Summary of the Deleted Items

**Summary of the deleted items**

| Items deleted | Subscale | Item-total correlation |
|---|---|---|
| Daydreamed about a better life | Evasive | -.07 |
| Tried to get out of the situation | Evasive | -.12 |
| Told yourself that the problem was someone else's fault | Evasive | -.03 |
| Slept more than usual | Evasive | .04 |
| Tried to ignor or avoid the problem | Evasive | .15 |
| wished that the problem would go away | Evasive | -.03 |
| Hoped that things would get better | Optimistic | -.03 |
| Told yourself that things could be much worse | Optimistic | .05 |
| Compared yourself with other people who were in the same situation | Optimistic | -.11 |
| Told yourself that you were just having a bad luck | Fatalistic | -.04 |
| Blamed yourself for getting into such situation | Emotive | .15 |

## Appendix G

Correlations among Study Variables

## Correlations among Demographic Variables

| | Age | Marital Status | No. of Children | Age of oldest child | Age of young-est child | No. of Dependents | Dependents at home | Dependents outside | Educational Level | Employment Status | Source of Financial Support |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sex** | .24 | -.03 | .12 | .03 | .06 | -.39** | -.35** | .20 | .00 | .16 | -.32* |
| **Age** | | .60*** | .21 | .84*** | .70*** | -.01 | -.02 | -.17 | -.60*** | -.01 | .06 |
| **Marital Status** | | | .00 | .00 | .00 | .18 | .16 | -.29* | -..55*** | -.07 | .10 |
| **No. of Children** | | | | .33* | -.07 | -.05 | .04 | -.28* | -.00 | -.12 | .22 |
| **Age of oldest child** | | | | | .67*** | -.23 | -.23 | -.05 | -.43** | .02 | .29 |
| **Age of youngest child** | | | | | | -.44** | -.45** | .13 | -.47*** | .04 | .14 |
| **No. of Dependents** | | | | | | | .95*** | .06 | .04 | .33* | -.70*** |
| **Dependents at home** | | | | | | | | -.09 | .06 | .24 | -.70*** |

2-tailed significance: * p <.05, ** p <.01, *** p <.001

## Correlations among Demographic Variables (continued)

| | Age | Marital Status | No. of Children | Age of oldest child | Age of young-est child | No. of Dependents | Dependents at home | Dependents outside | Educational Level | Employment Status | Source of Financial Support |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dependents outside** | | | | | | | | | -.00 | .12 | -.27 |
| **Educational Level** | | | | | | | | | | .16 | -.15 |
| **Employment Status** | | | | | | | | | | | .00 |

2-tailed significance: * p <.05, ** p <.01, *** p <.001

## Correlations among Demographic Variables and Illness and Treatment-Related Variables

| | Age | Sex | Marital Status | No.of children | No. of Dependents | Educational Level | Employment Status | Source of of financial support |
|---|---|---|---|---|---|---|---|---|
| **Months on Dialysis** | -.03 | -.08 | .04 | .03 | -.08 | -.27* | -.19 | .06 |
| **Comorb-idity** | .28* | -.12 | .28* | .03 | -.04 | -.14 | -.25* | .03 |
| **No. of Comorbid Conditions** | .30* | .17 | .04 | -.05 | .11 | -.21 | -.23 | .40* |
| **Years since Diagnosed with ESRD** | .03 | .08 | .03 | .04 | -.05 | -.16 | -.19 | .05 |

Two-tailed significance: *p <.05

## Correlations among Demographic Variables and Major Variables of the Study

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | .19 | -.03 | -.11 | -.24 | -.44*** | .16 | .06 | .27* | -.11 | -.20 | .10 | -.12 | -.01 | -.08 |
| **Sex** | .23 | .00 | .04 | .13 | .05 | .08 | .17 | -.05 | -.36** | .21 | -.05 | .22 | .13 | .17 |
| **Marital Status** | .19 | -.13 | -.01 | -.04 | -.21 | .05 | .04 | .24 | .10 | -.14 | .18 | -.05 | .13 | -.32* |
| **No. of Children** | .18 | .36** | .16 | -.01 | -.10 | .21 | .03 | .01 | .16 | -.15 | .23 | -.22 | .04 | .01 |
| **Educational level** | -.27* | .18 | .16 | .50*** | .70*** | -.20 | .18 | -.33** | .12 | .26* | -.11 | .36** | .14 | .02 |

Two-tailed significance: * p <.05, **p <.01, ***p <.001

1= availability of social support resources
2= satisfaction with social support resources
3= perceived social support
4= total coping methods
5= confrontive coping
6= evasive coping
7= optimistic coping
8= fatalistic coping
9 = emotive coping
10= palliative coping
11= supportant coping
12= self-reliant coping
13= quality of life before dialysis
14= present quality of life

## Correlations among Demographic Variables and Major Variables of the Study (continued)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **No. of Dependants** | .17 | -.04 | .00 | -.03 | .19 | -.28* | -.12 | -.18 | -.03 | -.05 | .01 | .10 | .20 | -.12 |
| **Employment status** | .07 | -.06 | .16 | .11 | .20 | -.25 | .17 | -.23 | -.17 | .20 | .10 | .06 | .14 | .10 |
| **Source of financial support** | -.09 | .08 | .27 | .08 | -.12 | .03 | .21 | -.03 | -.01 | .11 | .29* | -.00 | -.26 | .19 |

Two-tailed significance: * p <.05, **p <.01, ***p <.001

1= availability of social support resources
2= satisfaction with social support resources
3= perceived social support
4= total coping methods
5= confrontive coping
6= evasive coping
7= optimistic coping
8= fatalistic coping
9 = emotive coping
10= palliative coping
11= supportant coping
12= self-reliant coping
13= quality of life before dialysis
14= present quality of life

## Correlations among treatment and illness-related factors and major variables of the study

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **No. of month on dialysis** | .09 | -.02 | -.06 | -.01 | -.05 | .16 | -.05 | .06 | -.19 | .05 | -.04 | .03 | -.05 | .03 |
| **Presence of comorbid conditions** | .13 | .09 | -.07 | -.08 | -.02 | -.04 | -.09 | .15 | .05 | -.19 | .12 | -.17 | .07 | -.15 |
| **No. of comorbid conditions** | -.06 | .11 | -.31* | -.25 | -.20 | .16 | -.20 | -.18 | .24 | -.25 | -.16 | -.15 | .13 | -.26 |
| **Years since diagnosed with ESR** | .07 | .03 | -.06 | .01 | -.01 | .14 | -.07 | -.01 | -.14 | -.00 | .00 | .05 | -.07 | .02 |

Tow-Tailed significance * $p < .05$

1= availability of social support resources
2= satisfaction with social support resources
3= perceived social support
4= total coping methods
5= confrontive coping
6= evasive coping
7= optimistic coping
8= fatalistic coping
9 = emotive coping
10= palliative coping
11= supportant coping
12= self-reliant coping
13= quality of life before dialysis
14= present quality of life

## Correlations among Illness and Treatment-Related Variables

| | Presence of comorbid conditions | No. of comorbid conditions | Years since diagnosed with ESRD |
|---|---|---|---|
| **Months on dialysis** | .03 | .11 | .83*** |
| **Presence of comorbid conditions** | | .00 | .08 |
| **No. of comorbid conditions** | | | .29 |

Two-tailed significance: ***p <.001

## Appendix H

Classification of Reported Coping Methods

## classification of the reported coping methods (Total items = 19)

| Coping Methods | Classification |
|---|---|
| Take a walk on the beach | E |
| Fishing | E |
| Carpentry | E |
| Hang out with friends most of the time. | E |
| Watch television/listen to radio | E |
| visit relatives/neighbors. | E |
| go for a ride in the car | E |
| Take care of kids | E |
| Do some housework | E |
| Think about kidney transplant | P |
| Change the arrangement of the furniture of the house | E |
| Cook/help in cooking | E |
| Listen to/ read Quran | E |
| Go to the mosque | E |
| Think of killing myself | O |

E = Emotion-oriented coping methods.

P = Problem-oriented coping methods.

O = Other coping methods.

**classification of the reported coping methods (Total items = 19) (continued)**

| Coping Methods | Classification |
|---|---|
| Read books or newspapers | E |
| Attend social gatherings | E |
| Hand crafts/sewing | E |
| Go shopping | E |

E = Emotion-oriented coping methods.

P = Problem-oriented coping methods.

O = Other coping methods.

## Appendix I

Summary of the Most Troublesome Changes Reported

by Participants Since Dialysis was First Started

**Summary of the most troublesome changes reported by participants since dialysis was first started**

| Most troublesome changes | Frequency |
|---|---|
| Lack of sleep | 12 |
| Being under the machine for 3 times/week | 12 |
| Feeling of dependancy on the machine | 10 |
| No freedom/restriction of movement | 9 |
| Inability to do the housework like before | 9 |
| Having no future | 7 |
| Bored and upset on the day of dialysis | 7 |
| Itching | 7 |
| unemployment | 6 |
| Restriction of food/fluids | 6 |
| Giddiness | 6 |
| Presence of fistulla/shunt | 6 |
| Muscle spasms | 6 |
| Difficulty in breathing | 6 |
| Having hard time remembering things | 5 |

**Summary of the most troublesome changes reported by participants since dialysis was first started (Continued)**

| Most troublesome changes | Frequency |
|---|---|
| Lack of concentration | 5 |
| Insertion of the needle | 4 |
| Low blood pressure during dialysis | 4 |
| Feeling of being isolated | 3 |
| Spouse rejection | 3 |

## Appendix J

Frequency of the Use of Coping Methods

## Frequency of the Use of Coping Methods

| Coping Subscale | Item | Used often | | Used seldom | |
|---|---|---|---|---|---|
| | | N | % | N | % |
| Confrontive | Thought out different ways to handle the situation. | 11 | 18.3 | 11 | 18.3 |
| | Tried to look at the problem objectively and see all sides. | 7 | 11.7 | 14 | 23.3 |
| | Tried to keep the situation under control. | 2 | 3.3 | 22 | 36.7 |
| | Tried to change the situation. | 4 | 6.7 | 17 | 28.3 |
| | Tried to find out more about the problem. | 7 | 11.7 | 12 | 20.0 |
| | Tried to handle things one step at a time. | 3 | 5.0 | 12 | 20.0 |
| | Tried to work out a compromise. | 8 | 13.3 | 10 | 16.7 |
| | Set up a plan of action. | 4 | 6.7 | 4 | 6.7 |
| | Practiced in your mind what had to be done. | 2 | 3.3 | 5 | 8.3 |
| | Leanrned something new in order to deal with the problem. | 8 | 13.3 | 9 | 15.0 |

## Frequency of the Use of Coping Methods (continued)

| Coping Subscale | Item | Used often | | Used seldom | |
|---|---|---|---|---|---|
| | | N | % | N | % |
| Evasive | Tried to get away from the problem for a while. | 2 | 3.3 | 17 | 28.3 |
| | Tried to put the problem out of your mind and think of something else | 3 | 5.0 | 19 | 31.7 |
| | Waited to see what would happen. | 16 | 26.7 | 12 | 20.0 |
| | Let time take care of the problem. | 16 | 26.7 | 12 | 20.0 |
| | Put off facing up to the problem. | 7 | 11.7 | 27 | 45.0 |
| | Told yourself that this problem was really not that important. | 1 | 1.7 | 5 | 8.3 |
| | Avoided being with people. | 2 | 3.3 | 14 | 23.3 |
| Optimistic | Tried to keep your life as normal as possible and not let the problem interfere. | 12 | 20.2 | 24 | 40.0 |
| | Told yourself not to worry because every-thing would work out fine. | 4 | 6.7 | 26 | 43.3 |
| | Tried to keep a sense of humor. | 8 | 13.3 | 1 | 25.0 |
| | Thought about the good things in your life. | 1 | 1.7 | 24 | 40.0 |

## Frequency of the Use of Coping Methods (continued)

| Coping Subscale | Item | Used often | | Used seldom | |
|---|---|---|---|---|---|
| | | N | % | N | % |
| | Tried to think positively. | 3 | 5.0 | 10 | 16.7 |
| | Tried to see the good side of the situation. | 1 | 1.7 | 29 | 48.3 |
| Fatalistic | Expected the worst that could happen. | 14 | 23.3 | 17 | 28.3 |
| | Accepted the situation because very little could be done. | 14 | 23.3 | 22 | 36.7 |
| | Resigned yourself to the situation because things looked hopeless. | 3 | 5.0 | 15 | 25.0 |
| Palliative | Ate or smoked more than usual. | 3 | 5.0 | 1 | 1.7 |
| | Exercised or did some physical activity. | 1 | 1.7 | 22 | 36.7 |
| | Used relaxation techniques. | 4 | 6.7 | 5 | 8.3 |
| | Tried to distract yourself by doing something that you enjoy. | 4 | 6.7 | 16 | 26.7 |
| | Tried to keep busy. | 6 | 10.0 | 7 | 11.7 |
| Emotive | Worried about the problem. | 24 | 40.0 | 9 | 15.0 |
| | Got mad and let off steam. | 11 | 18.3 | 18 | 30.0 |

## Frequency of the Use of Coping Methods (continued)

| Coping Subscale | Item | Used often | | Used seldom | |
|---|---|---|---|---|---|
| | | N | % | N | % |
| | Took out your tension on some-one else. | 2 | 3.3 | 11 | 18.3 |
| Supportant | Talked the problem over with family or friends | 20 | 33.3 | 6 | 10.0 |
| | Talked the problem over with a profess-ional person. | 15 | 25.0 | 12 | 20.0 |
| | Prayed or put turst in God. | 1 | 1.7 | 51 | 85.0 |
| | Talked the problem over with someone who had been in a similar situation. | 8 | 13.3 | 24 | 40.0 |
| | Depended on others to help you out. | 11 | 18.3 | 38 | 63.3 |
| Self-reliant | Kept your feeling to ourself. | 5 | 8.3 | 20 | 33.3 |
| | Wanted to be alone to think things out. | 3 | 5.0 | 15 | 25.0 |
| | Thought about how you had handled other problems in the pas. | 5 | 8.3 | 14 | 23.3 |
| | Told yourself that you could handle anything no matter how hard. | 2 | 3.3 | 18 | 30.0 |

## Frequency of the Use of Coping Methods (continued)

| Coping Subscale | Item | Used often | | Used seldom | |
|---|---|---|---|---|---|
| | | N | % | N | % |
| | Tried to keep your feelings under control. | 5 | 8.3 | 22 | 36.7 |
| | Preferred to work things out yourself. | 4 | 6.7 | 19 | 31.7 |
| | Tried to improve your-self in some way so you could handle the situation better. | 2 | 3.3 | 14 | 23.3 |

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# VITA

Mouza Abdulla Suwaileh was born in Muharraq, Bahrain on December 12, 1955, the daughter of Abdulla Mohammad Suwaileh and Aysha Yacoob Al-Daen. She graduated from the College of Health Sciences, Bahrain, with an Associate Degree in Nursing in 1977. She has been working in different medical and surgical units and in the kidney care unit at Salmaniya Medical Center, Bahrain. In 1980, she joined the College of Health Sciences as a clinical instructor. In 1984, she entered the College of Health Sciences and was awarded a Bachelor Degree of Science in Nursing in 1986. During the next two years, she was teaching in the Associate Degree Program at the College of Health Sciences, Bahrain. In August 1988, she entered The University of Texas Graduate School of Biomedical Sciences, School of Nursing, at Galveston and was awarded the Degree of Master of Science in Nursing in May, 1990. For the next two years, she was the coordinator of the undergraduate program at the College of Health Sciences, Bahrain. In August, 1992 she entered the Graduate School at The University of Texas at Austin, School of Nursing.

Permanent Address:

Muharraq 208
Road # 845
House # 1676
Bahrain

This dissertation was typed by the author.

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