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Quality of Life for Palestinian Renal Failure Patients Underwent Hemodialysis

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Abstract
The quality of life (QOL) is an important predictor of outcome in end-stage renal disease (ESRD) patients. Therefore, (QOL) in (ESRD) patients have become an important focus of attention in evaluating hemodialysis. Patient's adaptation to a chronic disease is determined by their beliefs about (ESRD) and (HD); many studies take risk factors for poor QOL for hemodialysis patient.
The aim of this study: is to assess the quality of life (QOL) for patients undergoing hemodialysis (HD). Trough find out quality of life of patients undergoing dialysis and To find out factors (demographic data) affecting the quality of life of patients undergoing dialysis. **Methodology:** The research design is a quantitative descriptive approach; Purposive sample method will use according to the determination the inclusion criteria, the sample size was been 158 patients. **Data collection tool**: Self administrative structured questionnaire (**Quality Life Index Dialysis** version 21**)** used to collect data from participant. **Data** analyzed by SPSS software.
Result The study participants were; 150 female, 64% from Hebron hospital and 36% from Betjall. Regarding their work experience, more than 51% had diploma and 49% were educated at a bachelor degree in nursing, There is 21.5% who have a work experience for more than 10 years, 60% work experience ranged from 0 to 10 years, 26 % from 10- 15, and 29 % more than 15 years' experience. The most of participating married 60%, 35% from single, and 5% widow, and 52 % from participants with children from 1 -4 . In addition, 48 of participants with children more than 5. The sample according to gender 66% male and 34% female, this result indicate slightly increase in male patient in the sample, this happen by chance because we distribute questionnaire randomly. Most of patients are married with 71%, 48 % of participant live in village , 42 % live in city and 10 % in camp, 74 % from participant secondary school, and less than 20 % primary school, and 23 % from participant higher education.. Most of patients don't work with 78% and 17% retired. **And more than 46 % of** participant the icome less than 1500 NS. Most of patient have this disease from 1-7 yrs old with 59%**, 75 % of** participant make hemodialysis 3 time in a week, 21 % make twice in week. Most of patients have other chronic disease with 56%, most of Chronic disease are HTN, and diabetic.
Health related quality of life for Palestinian renal failure patient under hemodialysis and QOL domain scores were in moderate level. The renal failure has negative impact on QOL, this clear from negative correlation in some symptoms and items that mainly resulted from renal failure like pain, fatigue, financial difficulties. Result show Low level of global quality of life (GQOL) **Conclusions**: The moderate QOL can be made better by promote health polices to increase level of satisfaction of renal failure patients and to Staff training about support and teaching about diet, medication and self-care and Increase the focus on emotional, cognitive and social aspects of health also Focus more about dialysis departments' environment and facilities.

1. Introduction

Health, as defined by World Health Organization, is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity (WHO, 2010).

End stage renal disease (ESRD) is a psychologically effect illness with considerable emotional morbidity. The suffering and feeling shock when diagnosis, changes in body image and lower self-esteem and descent to dependence on a machine, fluid bag or partner can produce profound stress and adjustment problems**.**
Quality of Life (QoL) has been defined by the World Health Organizations the individuals' perceptions of their position in life, in the context of the cultural and value systems in which they live, and in relation to their goals, expectations, standards, and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, and level of independence, social relationships, and their relationships to salient features of their environment (Billington, 1999).

Kidney disease is an important global health problem (Nugent et al., 2011) and is at present the 12thhighest cause of death and the 17th highest cause of disability worldwide (Codreanu et al.,2006). Cross-sectional study by Khader MI, et al. 2013 that undertaken during the period 26-30 End Stage Renal Disease (ESRD) is the loss of renal function requiring treatment with any form of chronic dialysis or transplantation. ESRD causes handicap, as the patients have to report for hemodialysis two or three times per week or have to undergo peritoneal dialysis. The number of ESRD patients is increasing year by year all over the world (Al-Swailem, Mitwalli & Aswad, 1999).

Chronic kidney disease (CKD) is growing among all population groups worldwide and the incidence of end-stage renal disease continues to increase. This is reflected in the increasing number of people with ESRD

treated by dialysis or transplantation (Lysaght, 2002).

It is recognized that most CKD patients are prescribed large amounts of medications. Mostare prescribed to address the many symptoms of the disease and some to counteract the dangerous accumulation of different chemical.

The renal failure is chronic disease affect number of patient in their many life changes must occur in their life style as limitation in work, diet, and change in their physical health as should visiting hospital at least weekly and psychological problem like depression and grief so this problem physically, psychologically and emotionally affect quality of life of renal disease patient in many aspects of life.

Significant of study: ESRD patients are subjected to multiple physiological and psychological stressors and may be threatened with many potential losses and life style changes as they experience problems with disease-specific symptoms. The combination of a decrease in energy, the unavoidable emergence of socioeconomic problems, and emotional reactions compounds the stress facing the patient. The initiation of long-term dialysis treatment increases survival, but health related QoL remains impaired. Therefore, researchers and clinicians generally agree that health-related QoL, its determinants and treatment options that may preserve subjective well-being merit continued investigation (Sanner, et al. 2002).

This study aim to assess the factors these finding might help in improving the quality of life in dialysis patients. According to our past experience from training in many hospitals, we noticed that there were many complaints from Pts about their disease (ESRD) and treatment (HD). Otherwise, we noticed that some patients refused to regimen their necessary treatment and they refused cooperation with health instructions that prescribed from health team. So, we select this topic to study it, and assess the (QOL) for (HD) Pts. and to identify the effects of (ESRD) and (HD). As well as, we hope to give some recommendations according to study result.

Findings of the present study would provide important information about the impact of hemodialysis on health-related QoL of the study sample and identify concerns and unmet needs of hemodialysis patients, this would assist the nurse in establishing methods that would help patients to lead their life's probably.

QOL may be profoundly altered by chronic disease. A recent prospective evaluation of health-related QOL in a cohort of patients with chronic kidney disease showed decreasing scores with advancing chronic kidney disease, **(Mujais, 2009)**. Several studies of dialysis patients have shown that measures of QOL and depression are correlated with mortality and hospitalization **(Kalantar, 2001)**. For many dialysis patients, the quality of their lives is more important than hospitalization or mortality rates.

Quality of life continues to be a significant problem for patients receiving hemodialysis (HD) as a result of treatment HD complication and ESRD consequences **(Kathy, 2003)**.A host of physical and psychological symptoms occur in patients on chronic hemodialysis **(Steven, 1998).**

Quality of life affected by several factor, disease and treatment are some factors that also affect the quality of life. Patients with end stage renal disease (ESRD) and treated by hemodialysis (HD) have a negative perception about their quality of life. **(Cleary, Drennan, 2004)**. So that Social support associated with improved physical health and the religious may serve as coping mechanism for dealing with kidney disease **(Rambod, Rafi, 2007)**. Another study conclude Self-care self-efficacy have great impact on outcomes of QOL **(Tsay, et al, 2001)**.

(Rebecca et al, 2006) concluded that Depression is associated with decreased health-related quality of life and increased mortality in hemodialysis patients .so that Caregiver were not always aware of this inducing a sense of emotional distance and a sense vulnerability in the patient **(Hargen, 2004)**. There is many coping mechanism that use to reduce of the affect of depression on (QOL). Hemodialysis patients with strong spiritual beliefs had higher social function this will prevent depression and improve quality of life than those with weak spiritual beliefs **(Kao, 2007).**

This study was conducted by Anees , et al ,(2011) . In Lahore, Pakistan to evaluate the QOL of patients on hemodialysis and compare it with their caregiver of those patients and to investigate about the cause of ESRD and dialysis factors affecting QOL. It was cross sectional study for the patients on maintenance hemodialysis center for more than three months, the sample taken from three different centers for hemodialysis, the study sample was 125 patients and 50 participants as control group from care givers for those patients. In viewing on the result, the QOL in patients was poorer in comparison with their caregiver in all domains except for domain 4(environment), there was some differences in QOL between the various centers of their sample, not in the overall rating of QOL, but in the domains. As conclusion the researchers found that QOL hemodialysis patients, especially that of DM. Also, duration of dialysis had a reverse correlation with QOL.

A study conducted at West Georgia by **Tondra & Briaca,(2011)** to examine the quality of life in patients with End-Stage Renal Disease (ESRD) on hemodialysis by taken a convenience sample of 63 patients by using self-administered questionnaire which was Ferrans & Powers Quality of Life Index Dialysis Version III in which they were asked to rate “satisfaction” and “importance” of 68 items that measure overall quality of life in four domains: health and functioning, social and economic, psychological/ spiritual, and family , in addition to

a demographic survey which ascertained age, race/ ethnicity, education, employment, marital status and number of chronic illnesses . The result revealed a mean overall quality of life score of 23.2 while the possible range of scores for each subscale was 0 to 30. So this result suggests that patients receiving hemodialysis as treatment for End Stage Renal Disease have a fair perception of their quality of life.

A study conducted at São Paulo, Brazil by **Mirhelen, et al (2011)** to measure quality of life in patients undergoing hemodialysis (HD) or peritoneal dialysis (PD) by using the SF-12 and the Kidney Disease Quality of Life questionnaires at baseline, 6 months, and 12 months. 189 of 249 (76%) HD patients and 161 of 228 (71%) PD patients completed all three surveys. The study showed that the PD group was older and a larger number had diabetes, and consistently had higher scores than HD patients at all three measurement periods for patient satisfaction, encouragement / support from staff and burden of kidney disease, while the HD group had a greater percent of patients who clinically improved from baseline to 12 months compared to PD patients for sleep quality, social support, encouragement /support from staff, and overall health. The result of other dimensions of the Kidney Disease Quality of Life and SF-12 questionnaires were not significantly different between the PD and HD groups. So the study showed the evidence of PD and HD patients have equivalent health-related quality of life in

2. Subject and method

2.1 Aim of this Study: The aim of this study to assess the quality of life (QOL) for patients undergoing hemodialysis (HD).

2.2 Objectives

1) To find out quality of life of patients undergoing dialysis.
2) To find out factors (demographic data) affecting the quality of life of patients undergoing dialysis.

2.3 Research Questions:

1) What is the quality of life among patients undergoing dialysis?
2) What is the quality of life among patients undergoing dialysis in compared to group without any chronic disease?
3) Is there any relationship between quality of life and demographic data (age, gender, length of disease, another chronic disease)?

2.4 Hypothesis:

1) A quality of life is affected by the CRD.
2) A quality of life for participants underwent dialysis was less than quality of life for participants without any chronic disease.
3) There is a significant relationship between QOL in dialysis patients with demographic data (age, gender, length of dialysis and if having another chronic disease).

2.5 Study design

The research design is a quantitative descriptive approach. Cross sectional study will to assess of Quality of life for patient undergoing hemodialysis treatment.

2.6 Study setting: The study conducted on Hemodialysis ward Hebron Governmental Hospital and Yata Governmental hospital in the city of Hebron and in Biet Jala governmental Hospital in the city of Bethlehem districts – State of Palestine.

2.7 Population: The total number of patients with CRD (205) and underwent hemodialysis in Hebron governmental Hospital & Yata governmental hospital and Biet Jala governmental Hospital

2.8 Sample and sampling method: Purposive sample method used according to the determination the inclusion criteria, the sample size 170 patients.

Inclusion criteria:

1- Hemodialysis patient in the mentioned center who receive (HD) for two times or more weekly.
2- Patient who receive hemodialysis for period more than 6 Months.
3- Patient age range from 20-60 year.

Exclusion Criteria:

1- Patients who have hepatitis B and C.
2- Patients with amputations and congenital deformity**.**
3- Patients above 60 years old and below 20 yrs old.

2.9 Tool of data collection:

Self-administered structured questionnaire used to collect data from participant. Consisted of four parts:

1. The first part; **Socio-demographic data:** which include data about (age, gender, marital status, level of education, number of children and home and economic status).
2. **The second part contained four questions,** three questions about the ESRD disease; another question is asking if the patient have another chronic disease.

- Third part the is previously created questionnaire by European Organization for Research and Treatment of Cancer EORTC ; this questionnaire (EORTC QLQ-C30 Version 3.0)
- **Satisfaction part: included** 34 questions measure the satisfaction of the participants in relation to their health.
- **Importance of health: included** 34 questions measure the importance the health for the participants in the study.
- **QLI** is represented by all of items are used to calculate the total score, which reflects the quality of life.
- **HFSUB** score is represented by questions number (1, 2, 3, 4, 5, 6, 7, 8, 12, 17, 18, 19, 26 and 27).
- **SOCSUB** score is represented by questions number (14, 16, 20, 21, 22, 23, 24 and 25)**.**
- **PSPSUB** score is represented by questions number (28, 29, 30, 31, 32, 33 and 34)**.**
- **FAMSUB** score is represented by questions number (9, 10, 11, 13 and 15)

All respondents answered the same questions which construct in Arabic language which is the language of communication in the setting where the research setting.

Questions were framed in a way that is easy to understand using simple Arabic expressions. Difficult technical terms avoided in the preparation of the questionnaire.

2.10 Ethical consideration:

The title and research methods were approved by the Higher Studies Committee at the Faculty of Health Professions at Al-Quds University. Permission obtained to access the MOH hospitals when approval by the permission to conduct the study was granted from each hospital administration. The study participant were informed through a consent form (attached with the questionnaire), and received thorough explanation about purpose of the study, confidentially and sponsorship was ensured. In addition, they were informed about his/her right to refuse or to withdraw at any time during the study through the informed consent attached with each questionnaire.

Validity and reliability

This instrument international tool to test quality of life **scale and seen by expertise** was approved and evaluated by different experts including, researcher, nursing educators and other experts in the faculty of educational sciences to evaluate initial contents for validity. After revising the items in questionnaire and summarizing the expert's suggestions, modifications were made in wording and content. Some items were added but some others were dropped. The Cronbach alpha reliability obtained for overall scale was (0.85 and it is good in all scales and satisfy the purpose of the study.

3. Results

Findings of the following study are organized according to the research design and presented in three major parts. The first part includes the general characteristics and health status of the study sample, the second part include the scores (findings) of health-related quality of life (QoL) and its domains of the study sample, the third part present findings related to correlational analysis between health-related QoL findings and the biological, psychological and socioeconomic variables of the study participants.

The study participants were; 100 female, 64% from Hebron hospital and 36% from Betjall. Regarding their work experience, more than 51% had diploma and 49% were educated at a bachelor degree in nursing,

There is 21.5% who have a work experience for more than 10 years, 60% work experience ranged from 0 to 10 years, 26 % from 10- 15, and 29 % more than 15 years' experience.

The most of participating married 60%, 35% from single, and 5% widow, and 52 % from participants with children from 1 -4 . In addition, 48 of participants with children more than 5.

The sample according to gender 66% male and 34% female, this result indicate slightly increase in male patient in the sample, this happen by chance because we distribute questionnaire randomly.

Most of patients are married with 71%, 48 % of participant live in village , 42 % live in city and 10 % in camp, 74 % from participant secondary school, and less than 20 % primary school, and 23 % from participant higher education.

Most of patients don't work with 78% and 17% retired. **And more than 46 % of** participant the icome less than 1500 NS. Most of patient have this disease from 1-7 yrs old with 59%**, 75 % of** participant make hemodialysis 3 time in a week, 21 % make twice in week. Most of patients have other chronic disease with 56%,

most of Chronic disease are HTN, and diabetic.

Part two: questions to test level of satisfaction with the patients

Are You happy in your life	18.4%	25.3%	35.4%	20.9
Are you satisfied about your relationships with people?	9.5%	26.6%	40.5%	23.4%
Are you suffering from lack of adaptation to changes in your life	13.3%	20.3%	27.2%	39.2%
Are You satisfied with the health care provided to you?	12%	26.6%	39.9%	21.5%
Are committed to the treatment prescribed by a physician?	10.1%	22.2%	31%	36.7%
Are you committed to diet prescribed to you by a doctor	20.9%	31%	22.2%	25.9%
Are you go to follow up	6.3%	27.2%	38.6%	27.8%

The result from these questions indicates low level of satisfaction in patients undergoing hemodialysis.

Most of them don't feeling happy in their lives and not satisfied with health care providers also they don't committed to diet but on other hand they commit to treatment in high percentage and went for follow up

QOL Domains & GQOL

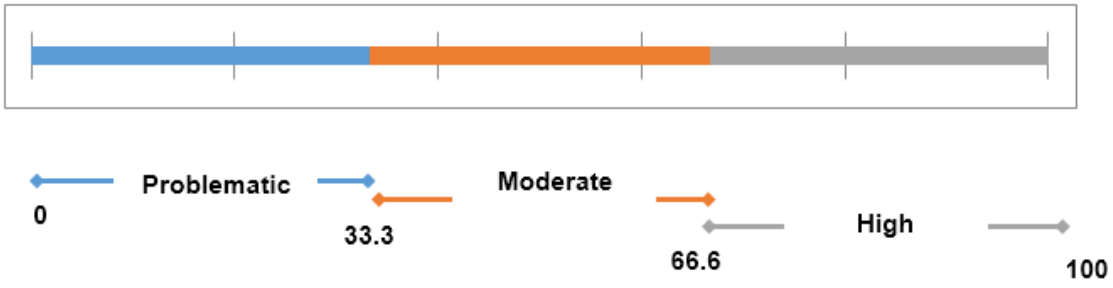
All Functional scales was calculated to be on 0-100 scale in which the higher score is, the higher level of function.

$$RawScore = RS = (I_1 + I_2 + ... + I_n)/n$$

Functional scales: $$S = \left\{1 - \frac{(RS-1)}{range}\right\} \times 100$$

Symptom scales / items: $$S = \{(RS-1)/range\} \times 100$$

As suggested in previous studies 33% cut-off point to categorize the scale.



Physical Function	Never Freq (perc)	A lot Freq (perc)	MEAN	Total Score
have You difficulty heavy physical work effort (tired)?	57 (36.1%)	101 (63.9%)	3.086	41% Moderate
Do you have trouble walking for a long time?	48 (30.4%)	110 (69.6%)	3.290	
Do you have trouble walking for a short period?	97 (61.4%)	61 (38.6%)	2.322	
Do You need to stay in bed or in a chair during the day?	95 (60.1%)	63 (39.9%)	2.365	

The physical function of pt ranked as modrate on QOL scale.

Roll Function	Never Freq (perc)	A lot Freq (perc)	MEAN	Total Score
Are You restricted or limited in the practice of your work daily?	75 (47.5%)	83 (52.5%)	2.623	43% Moderate
Are you Suffering from an inability to work	72 (45.6%)	86 (54.4%)	2.914	
Are you a restricted or limited in the practice of your hobbies or leisure activities?	62 (39.2%)	96 (60.8%)	2.322	
There is low work hours because you have the disease?	59 (37.3%)	99 (62.7%)	3.010	

The role function ranked moderate on QOL scale with increase in point of impairment in work hours because the disease.

Social Function	Never Freq (perc)	A lot Freq (perc)	MEAN	Total Score
Are your condition or your treatment affected your social life?	84 (53.2%)	74 (46.8%)	2.376	65% Moderate
Are you your relationship with your family (your children, your husband \ wife) affected as a result of illness?	113 (71.5%)	44 (28.5%)	1.699	
Do you suffer from social or family problems?	118 (74.4%)	39 (25.6%)	1.656	
Do you suffer from financial problems?	85 (53.8%)	73 (46.2%)	2.451	

The social function ranked as moderate on QOL scale

Cognitive Function	Never Freq (perc)	A lot Freq (perc)	MEAN	Total Score
Are you suffering from an inability to concentrate?	94 (59.5%)	64 (40.5%)	2.333	59% Moderate
Are you suffering from an inability to think?	105 (66.5%)	53 (33.5%)	2.011	
Are you suffering from the inability to read and write?	89 (56.3%)	68 (43.7%)	2.387	

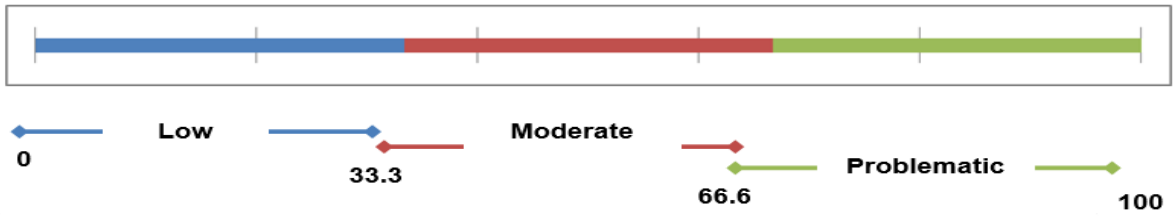
The cognitive function ranked as moderate on QOL scale

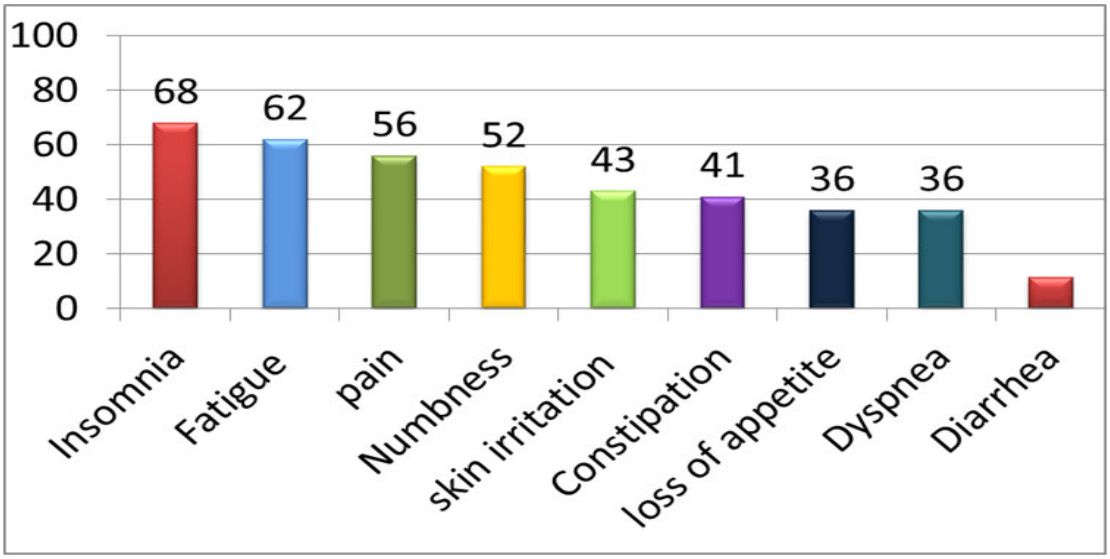
Emotional Function	Never Freq (perc)	A lot Freq (perc)	MEAN	Total Score
Do you feel bored and repression?	71 (44.9%)	87 (55.1%)	2.946	**42% Moderate**
Do you feel sad?	82 (51.9%)	76 (58.1%)	2.624	
Do you feel nervousness?	72 (45.6%)	86 (54.4%)	2.925	
Do you feel the anxious and tense?	66 (41.8%)	92 (58.2%)	2.892	
Do you feel burden to those around you?	97 (61.4%)	61 (38.6%)	2.258	

The emotional function ranked as moderate on QOL scale

Symptoms & Scales

- All Symptoms & Scales were calculated to be on 0-100 scale in which the higher score is, the higher level of Symptom.
- As suggested in previous studies 33% cut-off point to categorize the scale.





The symptom that ESRD patient ranked on QOL scale from Insomnia in the top of symptom phase to dyspnea at the last.

Most of symptom ranked moderate complaining by the patient in our study

Global quality of life	MEAN	Total Score
How do you rate your health in general?	4.526882	**41% Moderate**
How do you rate your quality of life \ level of your life in general?	4.924731	

The Global quality of life ranked as moderate on QOL scale

4. Discussion

Although advances in dialysis treatment have contributed to improved survival of patients with end stage renal disease (ESRD), the level of health-related quality of life(QoL) is much lower for those patients than for the general population (Fukuhara, et al. 2003). The physical limitations and disability of the dialysis patient occur because of the effects of renal failure itself, co-morbid disease, the treatment regimen and psychosocial problems (Levy et al., 2001). These leads to impaired physical, psychological and social well-being which are domains of the concept of health-related QoL. Hence, health-related QoL is impaired at those patients (Mollaoglu, 2004). The aim of the present study was to assess health-related QoL of ESRD adult patients undergoing HD.

The study findings illustrated that there were almost equality in males and females distribution. This is congruent with Thailand and Egyptian demographic data whereas males constituted almost half and respectively of the dialysis population. On the other hand, the majority of the present study sample was between 41-60 years old, In terms of marital status, findings demonstrated that two third of the study sample were married, while the rest of the sample were single (27%), divorced (7%) and separated. These findings are quiet similar to those reported by Franke, Reimer, Philipp and Heeman (2003) who explored differentiated aspects of QoL throughout the course of ESRD, they found that two third of the study sample were married but 7.5% were single and 21.3% were divorced.

Findings of the present study revealed that only 19% of the study sample works while the big bulk doesn't. Retired people weren't capable of tolerating life load besides their illness and naturally physically

limited because they were aged, but they were still financially supported. On the other hand, one quarter didn't have a specific function in their life, neither work nor financial support. Almost half of the sample were house wives who were responsible for family individuals which constituted additional load besides their illness. Sometimes supported financially and sometimes not.

These findings are to some degree congruent with the study conducted by Chen, Wu, Wang and Jaw (2003) who studied signs of clinical depression of chronic hemodialysis patients in Taiwan. They found that three fourth of the study sample didn't work. However, the present study revealed that two third of the study sample were financially supported by their family relatives. More than one third of the male patients were supported by a family relative. This was an unacceptable figure as the sample included patients from the adulthood period (21-65 years); a socially productive age group, and it is expected that they work to support themselves and their families.

On the other hand, co-morbidity was detected in the study sample, and hypertension was the most common co-morbidity. This finding could be related to the disease as ESRD causes fluid and electrolyte imbalance and hemodynamic instability mainly hypertension. The next co-morbidity was diabetes mellitus followed by cardiovascular disease. Hyperlipidemia was observed in very small portion of the study sample and so for renal bone disease. These figures are consistent and different with those reported by Jha and Chung (2003) who evaluated the practice of dialysis in developing countries. They found that hypertension is detected in two third of ESRD patients on renal replacement therapy in Malaysia, whereas diabetes mellitus is detected in almost the half. On the other hand, the prevalence of dys lipidemia was high in Malaysia, but it was not in Thailand. Regarding renal bone disease, the prevalence was high in Egypt and Singapore compared to the present study.

Referring to the present medical history, the majority of the study sample had three sessions/week for HD. These patients were subjected to two needle pricks three times weekly and this would lead to pain and discomfort. Lok (1996) found that two third of the dialysis patients experienced pain which was considered as the highest physical condition experienced by the study subjects. This condition was considered as a significant stressor related to QoL in dialysis patients.

As regards health status, findings of the present study indicated that almost half of the study sample had low health status scores. On the other hand, fatigue, thirst and skin itching were the most common symptoms that affect the study sample. These findings were congruent with previous studies, as Suet-Ching (2001b) who found that feeling fatigue and skin itching were ranked as the fourth and fifth lowest items of satisfaction respectively. In addition, the physiological status of patients was closely related to their QoL as the patients with worsening health conditions have the poorest QoL. On the other hand, Weisbord et al. (2003) indicated that three forth of the study sample had lack of energy, and the half complained of itching and dry mouth.

In relation to psychological status, the present study indicated that the study sample had moderate psychological status scores. This finding was supported by Mollaoglu (2004) who found that two third of ESRD patients in Turkey had depression and found an association between depressed mood and health-related QoL. The higher depression scores the lower health-related QoL scores. She explained that as a direct influence of chronic renal insufficiency on health-related QoL. Another study indicated that the mental health was significantly higher for patients treated in the United States than in Europe (Fukuhara et al., 2003).

Fortunately, the social status of HD patients is minimally impaired to moderate on as only one third of the study sample had low social status scores. This finding was expected as the study was conducted ina Muslim community where social interaction and social support were present. In spite of that social interaction was affected by HD schedules, fatigability, and diet restrictions imposed by ESRD. Findings of the present study was inconsistent with that reported by Suet-Ching (2001b) who found that social support was impaired and social activities were limited to conserve energy. Patel, Peterson and Kimmel (2005) found that perceived social support was correlated with decreased depression, increased QoL, increased compliance, increased satisfaction with care provided and increased level of religiosity and spirituality. On the other hand, Al-Akrash (1415H-1994G) assessed social services provided to ESRD patients in KSA-Riyadh and the extent of providing their social needs, accordingly the majority of the patients were found complaining of the effect of the disease on their social status and this was demonstrated in disturbed family relations, educational problems, noncompliance with diet and medication and financial problems.

Statistical analysis of the present study shows that female patients had lower health-related QoL scores than males, and there were no difference between patients from different age groups or educational level. These findings were to some extent in accordance with Suet-Ching (2001) who found that female patients had poorer QoL than males, and there were no difference among age groups but patients with tertiary education had significantly higher QoL scores than subjects with no formal education.

The finding of the present study revealed that female patients who perceived health-related QoL lower thanmales could be related to their marital status as there are 11 (16.6%) single females, 11 (16.6%) divorced women and 4 (6.06%) separated women. On the other hand ESRD and HD affected their roles as married women at home suchas motherhood, taking care of children, and her relationship with her husband. Accordingly,

AlAkrash (1415H-1994G) found that ESRDaffected negatively the family roles that a married woman could play.

The present study revealed that co-morbidity didn't have any effect on health-related QoL scores as there were no difference in health-related QoL between patients who had diabetesmellitus and those who don't. In contrast, patients with hepatitis C infection had lower health-related QoL scores than those who don't. This might return to complications of hepatitis C infection and social limitations imposed by the illness as the patient considers himself infectious, hence can't get married or live a normal marital life. These findings were inconsistent with Parsons and Harris (1997) who found that the QoL of patients with diabetes mellitus and

ESRD is lower than that of non-diabetic patients with ESRD. Similarly, Manns, Johnson, Taub, Mortis, Ghali and Donaldson (2002) reported that ESRD patients undergoing different modes of dialysis with co-morbid illness had lower health-related QoL.

Health-related QoL contains multiple aspects of health-related issues from the patients' perspective includingphysical, psychological and social functioning and overall wellbeing (Fiebiger, Miterbauer & Oberbauer, 2004). The psychosocial status is influenced by the health status, hence, such findings could be related to the illness (ESRD)and its treatment (HD).

Tovbin and colleagues (2003) hypothesized that psychosocial factors correlated with QoL and compensated for adverse effects of disease-related variables on QoL. They found that psychosocial factors, including perceived control and social support, were positively significantly correlated with QoL. The five most prevalent life-domains nominated as important for hemodialysis patients' QoL were (by order) health, family, economic status, leisure, and work/studies. Patients' level of satisfaction was the lowest on health, the most important life-domain. In the present study, this is demonstrated by the study finding that revealed that 85.1% of the study sample came for HD three times weekly. Another important issue was the burden imposed by the disease on the study sample. The sample included patients from the adulthood period, though they were unable to conduct a productive life. In addition to their vocational status, the present study revealed that almost the half of the male patients didn't work.

5. Recommendations

Based on the study findings, the researcher recommends to:

1. Conduct further research studies to find out the effect of nursing interventions on health-related QoL of ESRD patients undergoing hemodialysis as follows:
   - Assessment and management of nutritional status.
   - Health education about the disease, treatment options, prevention of complications and self-care activities.
   - Counseling sessions if necessary, to be able to cope with the new condition.
   - Activation of referral system and follow up by social workers in order to provide the suitable work according to their limited efforts.
   - Development and implementation of rehabilitation programs for ESRD patients undergoing HD.
1. Design and implement an educational program for nurses to help them to provide nursing interventions to ESRD patients undergoing hemodialysis to improve their health-related QoL.
2. To promote health policies toward increase level of satisfaction in renal failure patients.
3. Provide financial support for renal failure patients.
4. Staff training in pain management, support and teaching role.
5. Increase the focus on emotional, cognitive and social aspects of health.

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