Quality of Life among Patients with Hemodialysis

Aya Yehia Mohammed Elsodany (1), Zeinab loutfi Abdelhamed (2), Shimaa Saied Adam (3)

(1) Nursing Teacher at Technical Institute of nursing

(2) Professor of Psychiatric and Mental Health Nursing Faculty of Nursing – Ain Shams University

(3) Lecturer of Psychiatric and Mental Health Nursing Faculty of Nursing - Ain Shams University

Abstract

Background: Efforts to enhance quality of life in hemodialysis patients is one of the important aims of treatment in end stage renal disease which have encouraged health care providers to undertake more research to identify different dimensions of quality of life and effective ways to improve it. **Aim**: This study aims to assess quality of life among patients with hemodialysis. **Method:** A descriptive study design was used. The study included all available patients having hemodialysis and attended the hemodialysis unit at Menoufya university hospital affiliated to Menoufya city during three months. **Tools:** A structured interview questionnaire sheet was used to collect the data which was composed of two parts namely; socio-demographic characteristics of the studied patients and clinical data of the studied patients; Tool 2: Kidney Disease Quality of Life Scale Short Form 36 (KDQOL-SF36) version 1.3 (Arabic version). **Results:** The current study indicated that, there was a highly statically significant relation between gender and occupation of studied patients and their total quality of life. There was a highly statically significant relation between studied patients' clinical variables. **Conclusion:** Based on the finding of the current study, it was concluded that, the factors affecting QoL for patients on regular hemodialysis were gender and occupation. **Recommendations:** conducting similar researcher on large number of patients to achieve generalization of results.

Keywords: Chronic Kidney Disease, Hemodialysis Patient, Quality of Life

Introduction

The kidneys are vital organs of the body that remove excessive fluids as well as wastes from the blood and maintaining electrolytes balance in the body. Dysfunction of the kidneys can lead to renal failure, there are two types of kidney injuries; acute kidney injury and chronic kidney injury **(Ananya, 2018).**

Chronic Kidney Disease (CKD) is the most common cause of end stage renal failure worldwide, in developing countries like Egypt, there is an increase in the incidence and prevalence of End Stage Renal Diseases (ESRD) represents a great burden on health system. The prevalence of ESRD in Egypt raise from 225 per million populations (pmp) in 1996 to 483 pmp in 2004. Recently in Egypt, the estimated number of patients with ESRD almost doubled, from 18,000 in year 2000 to 33,693 in 2009 **(Hassona, et al., 2012).** Low prevalence in Egypt may be due to lack of registration and documentation programs for ESRD patients and also due to short life expectancy for these patients **(El-Arbagy et al., 2015).** When the kidney loses the majority of its function and glomerular filtration rate (GFR) become less than 15%; the patient is diagnosed as ESRD, once diagnosed with ESRD, patient needs to undergo renal replacement therapy (RRT) as a life-saving treatment (United states Renal Data System., 2014).

Hemodialysis is a process by which blood is removed from the body and circulated through an artificial kidney to temporarily clear the body from harmful wastes and extra fluids. Then, the filtered blood is returned to the patient

again. During the treatment, the blood moves through tubes into the dialyzer which filters out wastes and extra water. Then the filtered blood flows through another set of tubes back into the body **(Sreenivasulu and Dasari, 2017).**

Quality of life is the degree to which a person is able to function at a usual level of activity without or with minimal compromise of routine activities; QoL reflects the overall enjoyment of life, sense of well-being, freedom from disease comfort, and ability to pursue daily activities **(Froid, et al., 2017).** QoL a measure of the optimal energy or force that endows a person with the power to cope successfully with the full range of challenges encountered in the real world **(Turn, 2018).** QoL is the personal satisfaction or dissatisfaction with the cultural or intellectual conditions under which you live and it is generally regarded as the balance between pleasant and unpleasant factors and experiences **(Marquis, et al; 2017).**

In recent years, efforts to enhance QoL in hemodialysis patients were evaluated as one of the important aims of treatment in ESRD, having encouraged health care providers to undertake more research to identify different dimensions of QoL and effective ways to improve these. Nurses are an important members of the health care team and have a significant role in caring for patients with hemodialysis, in particular in identifying the needs of patients and their families. Limiting complications of the disease and improving quality of life. The quality of life given a central concern in any evaluative research. Improved QoL is probably the most desirable outcome of all health care policies **(Porter, 2018).**

Dialysis alters the life style of the patient and family and interferes with their lives. The major areas of life affected by ESRD and its treatment includes employment, eating habits, vacation activities, sense of security, self-esteem, social relationships and the ability to enjoy life **(Sherwood, 2018).**

Patients requiring long-term hemodialysis are often concerned about the unpredictability of the illness and the disruption of their lives. They often have financial difficulties, difficulty holding a job, weakening sexual desire and impotence, depression from being chronically ill and fear of dying. Younger patients worry about marriage, having children, and the burden that they bring to their families. The regimented life style that frequent dialysis treatments and restrictions in food and fluid intake impose is often demoralizing to the patient and family **(Hoshino, 2021).**

Health functioning of patient's receiving hemodialysis is rather poor and it is a significant reason for increased dependency. Apart from the financial dependency caused by unemployment, patients are extremely dependent on the medical staff and family environment. Most of patients on dialysis fell powerless, as they are unable to maintain their employment or deal effectively with their daily activities **(Hinkle & Cheever (2016),** the more their illness become severe, the more they become dependent, which creates feelings of being a burden on others **(González, et al., 2018),** therefore, it can be viewed as a significant reason why a substantial proportion of patients wish to withdraw from their treatment in an attempt to gain their independence and freedom again **(Hansen, 2017).**

The nurse plays a central role in caring of hemodialysis patients and their families. The role of the nurse, as a member of the health care team, includes direct patient care, helping in decision making, counseling to guide and help him to cope with stressors of his psychological changes. It also involves education of the patient and family as related to illness, treatment and complications **(Manavalan, et al., 2017).** Moreover, Nursing care for hemodialysis patients includes such behaviors as active listening, comforting, knowing to patients as a person, respecting the patients, providing information for decision making, realizing the patient’s knowledge,

being perceptive of patients' needs and giving good physical and psychological support **(Marzouq, et al., 2021).**

The role of the nurse in caring of hemodialysis patients can be divided into general care, educator and facilitator and counselor **(Ran and Hyde, 2018).** The role of the nurse in general care of hemodialysis patients can be classified according to the stage of dialysis. At all these stages, monitoring the physical status of the patient is central to detect any abnormal changes, to ensure comfort, and to help the patient to adjust to the care and changes in life-style **(Morfin, et al., 2016).**

Lastly, the nurse should monitor the patient for the occurrence of any complications such as hypovolemia, air embolism, or dialysis disequilibrium syndrome. This is of particular importance among older adults who are at greater risk of complications including systemic or peripheral circulatory problems as hypertension, hypotension and hypoxia that can be life-threatening **(Al-Khaldi, 2017).**

Significance of the study:

Worldwide; the prevalence rates of chronic kidney disease are high and have increased in the last few years to about 13–15%. In 2016, nearly 125,000 people in the United States started treatment for ESKD, and more than 726,000 (2 in every 1,000 people) were on dialysis or were living with a kidney transplant **(Centers for Disease Control and Prevention., 2019).**

In Egypt, despite the prevalence of ESRD continues to increase; there are no recent data about the prevalence of ESRD. The estimated annual incidence of CKD is around 74 per million populations (pmp) while the hemodialysis prevalence rate was 414 patients pmp **(Ahmed, Yassin, Boules, 2016).** While in Saudi Arabia the incidence is 80 to 120 pmp **(Hassainement et al., 2017).**

Chronic renal failure patients are treated to provide their health, while several physical, mental and social stressors affect them overshadowing the quality of life for dialysis patients. Quality of life is an important criterion assessing the effectiveness of health care and the impact of the disease on life of the person. It provides the opportunity to evaluate the psychological burden of chronic disease and the effect of specific treatment. It also helps in comparing alternative treatments, improving clinical outcomes, facilitating rehabilitation of end stage renal disease patients and enhancing patient satisfaction.

Thus, studying the concept of quality of life in hemodialysis patients by a nurse is very important issue. This study will assess QOL in different domains of patients with chronic kidney disease undergoing mechanical hemodialysis and the factors responsible for it.

Aim of the study

The aim of this study is to assess quality of life among patients with hemodialysis at dialysis unit at Menoufia university hospital affiliated to Menoufia University

Research questions

1. What are the levels of quality of life among patients with hemodialysis?
2. What is the quality of life among hemodialysis patients?

Subjects and Methods

Research design:

Qualitative descriptive research design was used in carrying out the current study.

Setting:

The current study was conducted in hemodialysis unit at menoufya university hospital affiliated to menoufya city. a very huge hospital with a land scape over two thousands and five hundred square meters. It consists of two buildings; the main building consists of eight floors with capacity of six hundred beds and other for the out-patient clinics and consists of three floors.

This is a university hospital that provides hemodialysis services besides most types of specialties that include heart surgery, neurosurgery, bone and joint surgery, plastic surgery, maxillofacial surgery, cardiovascular surgery, urology, otolaryngology – head and neck surgery, obstetrics and gynecology, pediatrics unit, hematology unit, intensive care units and emergency units. The hospital also has fourteen operating rooms in addition to the blood bank, lab investigations and diagnostic procedures units

Subjects:

A convenience sample of all available patients (N= 60) having hemodialysis who are attending the previously mentioned setting during 3 months and are willing to participate in this study

Data collection tools:

Data were collected through using of the following tool:

Tool 1: A structured interview questionnaire sheet for patients

It was developed by the researcher in Arabic language after reviewing the related literature. It comprised of two parts as follows:

Part (1): Concerned with socio-demographic characteristics of the studied patients such as age, sex, and level of education.

Part (2): Concerned with clinical data of the studied patients such as duration of illness, previous hospitalization and number of hospitalizations.

Tool 2: Kidney Disease Quality of Life Scale Short Form36 (KDQOL-SF36) version 1.3 (Arabic version).

The kidney disease quality of life scale Short Form36 (SF36) was adopted from **(Abd Elhafeez et al., 2012)** to assess quality of life among patients with kidney disease. SF-36 includes 36 items that measure eight domains of functioning and wellbeing on a 100-point scale. The eight domains are: physical function (10 items), role limitations caused by physical problems (4 items), role limitations caused by emotional problems (3 items), pain (2 items), general health perceptions (5 items), social function (2 items), emotional well-being (5 items), and energy/fatigue (4 items). The final item, the overall health rate item, asks the respondents to rate their health on a 0-10 response scale. Results from the SF-36 instrument are further summarized into a physical composite summary (PCS) score and a mental composite summary (MCS) score PCS aggregates items from physical function, role physical, pain, and general health. MCS aggregates items from role emotional, emotional wellbeing, energy, and social function.

Scoring system for Kidney Disease Quality of Life Scale Short Form (KDQOL-SF36):

The standard scoring program of the KDQOL-SF^{TM} 1.3 is based on the Microsoft Excel 97 spreadsheet program and includes information about the computation method. The scores for each dimension range from 0 to 100, with higher scores reflecting better HRQOL.

Pilot study

A pilot study was carried out on 10% of the total subjects' size (6 patients) to demonstrate feasibility and applicability of the tools. According to the results of the pilot study, there were no significant modifications required in the study tools. Those who shared in the pilot study were excluded from the main study sample.

Fieldwork:

Data collection extended over a period of three months period from the first of May 2020 to the end of July 2020. Data was collected during period of hemodialysis session (Morning and afternoon shift). The investigator started data collection by introducing himself to patients. Each patient was individually interviewed to collect the necessary data. The

time consumed to answering the questionnaire ranged about 20 to 30 minutes.

Ethical Considerations:

The researcher followed ethical research principles as follow;

1. Health care providers and the head nurse of the dialysis units were informed about the purpose of the study & time of data collection and all necessary details to gain their cooperation during the data collection process.

2. All patients were informed about the purpose of the study.
3. Patients were assured of all the confidential processes of the collected data and that it will be used only for research purpose by the investigator who is a master candidate at the Faculty of Nursing, Ain Shams University.
4. An informed oral consent was obtained from the studied patients after gaining their acceptance to participate in the study.
5. Patients were assured that they have every right to withdraw from the study at any stage without any negative consequences.
6. All tools of data collection were coded to avoid declaration of any personal information of sample information.

Statistical analysis:

Data entry and statistical analysis were done using (SPSS) statistical software package. Quality control was at the stage of coding and data entry. Data were presented using descriptive statistics in the form of frequencies and percentage for qualitative variables; mean and standard deviation for quantitative variable. Qualitative categorical variables were compared Chi-square (X2) test. Statistical significance was considered at (P-value <0.05).

Results:

Table (1): revealed that 45% of studied patients were in the age group from 50 to less than 60 years of age. In relation to gender it was evident that 73.3% of studied patients were male. Concerning patient residence, more than half were in rural. As regard the marital status it was evident that the highest percentage of studied patient were married. This table revealed also that more than one third (35%) of studied patients have university education while 38% of them have middle education.

Figure (1): illustrated that more than half (51.7%) of studied patients reported high physical functioning.

Figure (2): showed that less than two thirds (65%) of studied patients reported high fatigue level.

Table (2): revealed that the vast majority of studied patient (90%) reported that they have low emotional well-being in relation to feeling calm and peaceful while the majority of them (83.3%), have high emotional well-being in relation to feeling downhearted and blue. Additionally, more than half of studied patient (56.7%) reported that they have high emotional well-being in relation to being a very nervous person.

Table (3): demonstrated that 73.3% of studied patient reported low role emotional concerning do their work as carefully as usual. In relation to social function, more than two thirds of studied patients (66.7%) reported high social function concerning how much time their physical health or emotional problems interferes with their normal social activities with family, friends and neighbors.

Table (4): clearly indicated that there was a highly statically significant relation between gender and occupation of studied patients and their total quality of life at (P=.009& .002, respectively).

Table (5): revealed that, there was a highly statically significant relation between studied patients' clinical variables (previous hospitalization, time since starting dialysis, weekly dialysis time and dialysis session duration) and their total quality of life at (P= .002, .045, .001 & .003 respectively).

Table (1): Frequency distribution of sociodemographic characteristics of studied sample (n= 60).

Socio demographic Variables	Number (No.)	Percent (%)
Age		
Less than 40	7	11.7
40: less than 50	17	28.3
50: less than 60	27	45.0
60 years and more	9	15.0
Mean ± SD = 51.25 ± 9.33		
Gender		
Male	44	73.3
Female	16	26.7
Residence		
Rural	31	51.7
Urban	29	48.3
Marital status		
Married	44	73.3
Divorced	6	10.0
Widow	10	16.7
Educational Level		
Cannot read or write	11	18.3
Can read or write	5	8.3
Middle education	23	38.3
University education	21	35.0
Occupation		
No work	22	36.7
Work	28	46.7
Housewife	10	16.7
Family numbers		
1.00	5	8.3
2.00	10	16.7
3.00	12	20.0
4.00	14	23.3
5.00	19	31.7

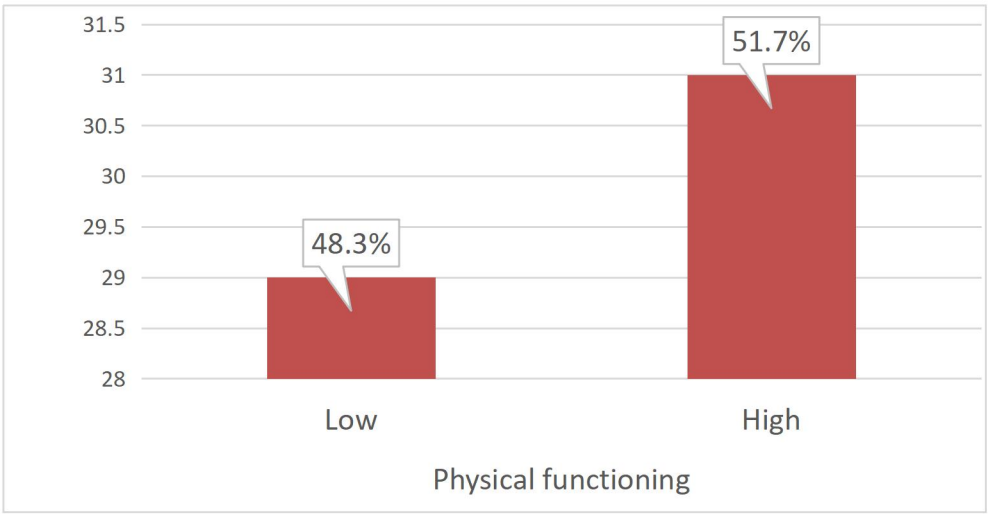

Figure (1): Physical functioning levels of studied patients (n=60).

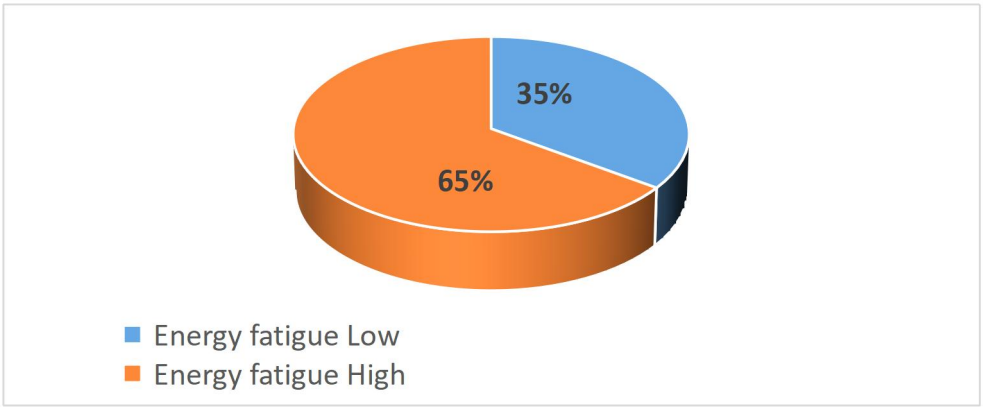

Figure (2): Energy/fatigue levels of studied patients (n=60).

Table (2): Distribution of emotional well-being levels of studied patients (n=60).

Items	Low (%)	High (%)	Mean	SD
Emotional well-being				
1. Have you been a very nervous person?	43.3	56.7	3.58	.79
2. Have you felt so down in the dumps that nothing could cheer you up?	45	55	3.57	.83
3. Have you felt calm and peaceful?	90	10	4.82	.93
4. Have you felt downhearted and blue?	16.7	83.3	4.45	.91
5. Have you been a happy person?	85	15	4.37	.86
Total			45.67 ± 4.44	

Table (3): Distribution of role emotional and social function levels of studied patients (n=60).

Items	Low (%)	High (%)	Mean	SD
Role emotional				
1. Cut down the amount of time you spent on work or other activities?	65	35	1.35	.48
2. Accomplished less than you would like?	51.7	48.3	1.48	.50
3. Didn't do work or other activities as carefully as usual?	73.3	26.7	1.27	.45
Total			36.67 ± 3.40	
Social function				
1. During the past 4 weeks, to what extent have your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?	35	65	3.18	1.08
2. During the past 4 weeks, how much time have your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?	33.3	66.7	3.00	1.19
Total			47.71 ± 5.39	

Table (4): Socio demographic in relation to levels of total quality of life (n=60).

Socio demographic Variables	Low QoL (%)	High QoL (%)	X^2	P
Age				
Less than 40	11.7	0		
40 : less than 50	16.7	11.7	4.685	.196
50 : less than 60	28.3	16.7		
60 years and more	11.7	3.33		
Gender				
Male	43.33	29.9	6.514	.009*
Female	25	1.67		
Residence				
Rural	40	11.7	2.447	.099*
Urban	28.3	19.9		
Marital				
Married	46.7	26.7		
Divorced	8.3	1.67	1.701	.427
Widow	13.3	3.33		
Educational Level				
Cannot read or write	15	3.33		
Can read or write	6.67	1.67	2.815	.421
Middle education	21.67	16.67		
University education	25	10		
Occupation				
No work	30	6.67		
Work	21.67	25	12.69	.002
Housewife	16.67	0		
Family numbers				
1.00	5	3.33		
2.00	115	1.67		
3.00	16.67	3.33	5.848	.211
4.00	15	8.33		
5.00	16.67	15		

*= Fisher's Exact Test

Table (5): Clinical characteristics in relation to levels of total quality of life (n=60).

Clinical Variables	Low QoL (%)	High QoL (%)	X^2	P
Diagnosis				
ARF	10	0	3.089	.090*
CRF	58.33	31.67		
Duration of illness				
Three years or less	15	8.33		
More than 3 up to 6 years	33.33	11.67	.752	.686
More than 6 years	20	11.67		
Causes of illness				
Diabetes	11.67	10		
HTN	23.33	5		
Genetics	6.67	0	6.213	.184
Chronic UTI infections	8.33	8.33		
Others	18.33	8.33		
Previous hospitalization				
1.00	8.33	6.67		
2.00	13.33	3.33	14.668	.002
3.00	8.33	16.67		
Four and more	38.33	5		
Other diseases				
Yes	50	21.57	.144	.465
No	18.33	10		
Time since starting dialysis				
Less than year	8.33	8.33		
1 : < 3 years	8.33	8.33	8.056	.045
3 : < 6 years	36.67	5		
Six years or more	15	10		
Transportation				
Public transportation	43.33	20		
Private transportation	16.67	11.67	3.028	.220
Others	8.33	0		
Weekly dialysis times				
1.00	8.33	0		
2.00	0	8.33	13.417	.001
3.00	60	23.33		
IV type				
Central line	8.33	10	3.258	.077*
Fistula	60	21.67		
Dialysis session duration				
Two hours	0	8.33		
Three hours	5	18.33	11.772	.003
Four hours	15	5		
Medical condition during dialysis				
Hypotension	30	16.67		
Nausea and vomiting	21.67	13.33	3.204	.202
Cramps	16.67	1.67		

Discussion:

Chronic kidney disease is nowadays the most common cause of end stage kidney failure worldwide in developing countries like Egypt, there is an increase in the incidence and prevalence of ESRD that represents a great burden on health system. The prevalence of ESRD in Egypt raise from 225 per million populations in 1996 to 483 pmp in 2004. The main leading cause of ESRD in Egypt is hypertension followed by diabetes and still unknown causes exert in about 15% **(Hiremath, et al., 2011).**

In recent years, efforts to enhance QoL in hemodialysis patients as one of the important aims of treatment in ESD have encouraged health care providers to undertake more research to identify different dimensions of QoL and effective ways to improve these. Nurses are important members of the health care team and have a significant role in caring for patients with hemodialysis, in particular in identifying the needs of patients and their families. Limiting complications of the disease and improving quality of life. The quality of life is of central concern in any evaluative research. Improved QoL is probably the most desirable outcome of all health care policies **(Potter, 2018).**

Time of diagnosis of ESRD an pre dialysis care may be important factor related to quality of life of patients on dialysis treatment **(Sesso & Yoshihiero, 2016).** They concluded that late diagnosis of ESRD and the consequent lake of pre dialysis care adversely affect the quality of life of the hemodialysis patients. Early diagnosis and regular pre dialysis care should be encouraged to improve the quality of life during dialysis treatment **(Evans, et al; 2016).**

The current study revealed that 73.3% of studied patients were male and mean age of studied population was 51.25 + 9.33; this result is congruent with (Yılmaz et al., 2019) who found in their study about "Assessment of Health-Related Quality of Life of Chronic Kidney Disease Patients in Aminu Kano Teaching Hospital, Kano" that the mean age of CKD subjects in this study was 53 ± 14 years, and the Majority of their subjects were male (51%) with an M: F ratio of 1.1:1.

Regarding physical activity the current study revealed that more than half of studied patient (53.3%) have low physical activity when doing vigorous activities, such as running, lifting heavy objects and when bathing or dressing themselves and 73.3% of them have low physical activity when climbing several flights of stairs; this result goes in the same line with the result of **(Hoshino, 2021)** in his study about "Renal Rehabilitation: Exercise Intervention and Nutritional Support in Dialysis Patients" that Physical activity levels in dialysis patients are drastically reduced compared to the general elderly population. This may be because of dialysis patients tend to have sedentary lifestyles on the day of dialysis and probably due to inactivity for the dialysis procedure and post dialysis fatigue syndrome.

The current study was clearly showed that (58%) of studied patients have high levels of emotional wellbeing (Figure 6). This result goes in the same line with **(El Kass et al., 2020)** who reported in their study about "Factors Affecting Quality of Life among Patients Undergoing Hemodialysis Program in Gaza Strip" that (36.5%) of the patients under their study had reported satisfied level of problems related to psychological health (emotional well-being). While, This result was in disagreement with **(Sein et al., 2020)** who reported in their study about "Emotional distress and adjustment in patients with end-stage kidney disease: A qualitative exploration of patient experience in four hospital trusts in the West Midlands, UK" that The majority of their studied patients described a substantial emotional burden from their illness. Feelings of helplessness, loss of control and anger which were mixed with frustration and distress, and created a difficult emotional state.

Moreover, demonstrated that 73.3% of studied patient reported low role emotional concerning do their work as carefully as usual. This result was in contrast with results of **(El Kass et al., 2020)** who reported in their study about "Factors Affecting Quality of Life among Patients Undergoing Hemodialysis Program in Gaza Strip" that (40.8%) of their studied patient had reported satisfied level with emotional role.

From the researcher's point of view; these results may be due to hemodialysis patients form strong emotional bonds with each other and interact like siblings. Therefore, any death or decline will affect them psychologically even though death is a constant fear among CKD patients. Hemodialysis patients are prone to experience psychological issues and it may impact their quality of life. Emotional support is needed from friends and families so they can deal with the problems effectively.

It was clearly evident that 68.3% of studied patient have low overall quality of life. This result goes in the same line with results of **(Ishiwatari et al., 2020)** who reported in their study about "Changes in Quality of Life in Older Hemodialysis Patients: A Cohort Study on Dialysis Outcomes and Practice Patterns" that HR-QOL of patients who on regular dialysis was lower than that of the general population or patients who underwent kidney transplantation. At the same time, this result was incongruence with **(Medicine et al., 2021)** who reported in their study about "Differences in the quality of life of chronic kidney disease patients undergoing hemodialysis and continuous ambulatory peritoneal dialysis" that the overall quality of life for their studied patients undergoing regular hemodialysis was at a good degree, with 103 patients having an average score of 82.4%.

The current study revealed that there was a highly statically significant relation between studied patients' clinical variables (previous hospitalization, time since starting dialysis, weekly dialysis time and dialysis session duration) and their total quality of life. This result in the same line with another study by **Manavalan et al., (2017)** done in India who revealed that there was quality of life had statically significant relation with occupation. It can be explained by that the work environment may contribute to and affect the quality of life, especially if it is healthy and conducive to recovery. Also, another study by **Farag et al., (2020)** in India revealed that there was a highly statically significant relation between dialysis session duration and total quality of life of CKD patients.

Despite the importance of quality of life (QoL) in primary care patients with emotional disorders, the specific influence of the symptoms of these disorders and the sociodemographic characteristics of patients on the various QoL domains has received scant attention **(González-Blanch et al., 2018).** The present study showed that negative association between pain and role physical as well as between general health and pain. It was supported by **González-Blanch et al., (2018**) study in Spain who revealed that there was a significant association between pain and general health in primary care patients with emotional disorders. Also, another study by **Ramatillah et al., (2017)** in Malaysia revealed that role physical negatively associated with pain in patients undergoing hemodialysis.

Conclusion

Based on the finding of the current study, it was concluded that, the factors affecting QoL for patients on regular hemodialysis were gender and occupation. Moreover; there was strong positive association between total quality of life of studied patient and their role physical, role emotional, social well-being and energy level.

Recommendation

1. Apply this research on a larger number of patients, to identify and evaluate more other factors not analyzed in this study which may affecting QoL for patients with ESRD such

as: coping behaviors and quality of care received.

2. Designing an intervention for CKD patients to improve their QoL and to measure the health change for that patient to ensure that the intervention will be helpful.

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