

Assessment the Level of Independence Related to Quality of Life for Patients with Kidney Transplantation at Mosul City¹

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ABSTRACT

Background And Objective: More than 800 million individuals, or more than 10% of the world's population, suffer from chronic kidney disease, a degenerative condition. The best replacement therapy for end-stage renal illness is kidney transplantation. The aim of the study to describe the socio-demographical characteristics of the study sample and determine the quality of life (QoL) patients regarding of the level of independence with Kidney transplantation. Also find out the relationship between demographical characteristics of the samples and their (QoL).

Method : A data of this cross sectional design is retrieved from a longitudinal study conducted in Ibn sina teaching hospital at Mosul city from 12.2022 to 4. 2023, and included KTR aged from 21 years and older with a functioning graft after kidney transplant .Measures include demographic characteristics and level of independence related to quality of life .to evaluate health related of quality of life questionnaire instrument were administrated.

Result: Regarding of demographic the shows Table (1) the socio-demographic characteristics of the study sample. The highest percentage of the study sample is male to be (71.7%). The table (2) shows Medication in the level of independence have highest level . To ensure the presence or relation between socio- demographic characteristic and level of independence for kidney transplant patient and quality of life among them for table which demonstrate statistical difference in independence domain There is a direct correlation between (movement, transition and completion of duties) and each of (Age), (Number of kidney transplant), respectively, in terms of the value of the rank correlation coefficient, whose value amounted to (0.426) and (0.513), respectively, and that this relationship is significant in terms of the probability value. The accompanying correlation coefficient, which amounted to (0.029) and (0.003), respectively, which is less than (0.05).

Conclusions: The current study concludes the following The main domain and sub-domains of quality of life have strong positive or negative relationships with what the sickness may have left behind and study showed that the improvement in HRQOL obtained after KT is linked to the previous dialysis modality, with PD patients benefiting the most.

Keywords: *Quality of life; kidney transplantation; level of independence*

INTRODUCTION

Chronic kidney disease is a degenerative disorder with a high rate of morbidity and mortality with no known cure. Adults with diabetes and high blood pressure are more prone to it. Maintaining kidney function can improve outcomes and can be accomplished by non-pharmacological techniques (such as dietary and lifestyle changes) as well as pharmaceutical therapies that are focused at chronic renal disease and kidney disease-specific. [1].

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The preferred course of therapy for eligible people with ESRD is kidney transplantation. Allograft and patient survival in the United States have significantly increased since the introduction of kidney transplantation in 1954 as a result of improvements in surgical methods and immunosuppression. Few studies have compared kidney transplant outcomes between the United States and other countries[2].

The long-term success of kidney transplantation, which is fairly simply characterized by patient mortality or renal disease leading to graft loss, is influenced by a variety of variables. The quality of the transplant itself is perhaps the most crucial of these considerations; whereas kidneys from live donors have a beneficial effect, kidneys from donors who met the enlarged criteria have a negative effect[3].

Poor levels of physical activity and exercise practices are characteristics of people with chronic kidney disease (CKD). Low levels of physical activity have a negative influence on functional status, quality of life (QoL), and are substantially associated with mortality and morbidity along the illness trajectory. Exercise therapies in CKD have long been demonstrated to improve patients' health and QoL [4].

Roughly 0.1 percent of the world's population has kidney failure and requires renal replacement treatment. More than 2 million individuals worldwide are living with a working kidney transplant or are receiving chronic dialysis therapy, according to figures from the National Kidney Foundation. Kidney failure has significant effects on maintaining regular employment, lowers quality of life, and raises psychological difficulties[5].

In order to understand the patients' situations following transplantation, patient-reported outcome measures, such as those that evaluate health-related quality of life (HRQOL) and symptoms linked to treatment side effects, have become more and more important [6].

The World Health Organization (WHO) defines quality of life (QOL) as an individual's impressions of their place in life in relation to their goals, expectations, standards, and concerns in the context of the culture and value systems in which they live. Health-related quality of life (HRQOL) has gained widespread acceptance as a crucial instrument for evaluating the health and happiness of patients undergoing renal replacement therapy (RRT)[7].

METHODOLOGY

Ethical issues : Approvals was obtained from an ethical committee from the university of Mosul/Collage of Nursing, the Nineveh Health Department ,and Inb-Sina teaching hospital ,according to administrative books .

Design of the study :To achieve the purpose and objective of the study, a cross-sectional study design was used by revising the questionnaire. quality of life in patients have kidney transplant were measured by the “WHO quality of life questionnaire, for the period from 20th November 2022 to 10th July 2023.

Sample of the study and Setting : A study sample was selected from patients were coming to the Ibn-sina teaching hospital .and the size of the sample was 300 participants.

Data collection and Instrumentations :The study samples were collected from one hospital in the Mosul city for the period from 20th November 2022 until 15th Aprill 2023, and then the theoretical part was carried out. A questionnaire based on the WHO scale was constructed and formulated to obtain the data. The questionnaire consisted two parts:

1.Part 1 :the first part was prepared to measure the demographic characteristic of the samples .

2.Part 2: the part two was prepared to measure the level of independence to the samples . level of independence : It consists of (4) sub-domains such as;Movement, transition and completion of duties, medication , Nutrition and Environment .

Statistical Analysis :The data were analyzed using SPSS version 26 to interpret the study's findings.

RESULTS

1.Regarding of demographic the table (1) shows the socio-demographic characteristics of the study sample. The highest percentage of the study sample is male to be (71.7%). The largest proportion of patient belong to the age to be (From 21– 30 year), the highest percentage for residence was living in the city to be (68.7%), regarding marital

status highest percentage of patient was married to be (69.7%). The highest percentage for occupation was Civil work to be (31%), the largest proportion of the study sample is (38.7%) regarding educational level is only Primary school, for the Monthly income the highest percentage was (less than 250,000-500,000) to be (75.3%), for a The date of the first kidney transplant the largest percentage(72 months or more)to be (34.7%), for The Number of kidney transplants, the highest percentage was (At one time) to be (97.3%).

2.level of independence :Table (2) appeared that the statement (Medication) is the highest level ,while the statement (Movement, transition and completion of duties) is the lowest level.

3. To ensure the presence or relation between socio- demographic characteristic for kidney transplant patient and quality of life among them for table (3) which demonstrate statistical difference in independence domain. There is a direct correlation between (movement and transition) and each of (Age), (Number of kidney transplant), respectively, in terms of the value of the rank correlation coefficient, whose value amounted to (0.426) and (0.513), respectively, and that this relationship is significant in terms of the probability value The accompanying correlation coefficient, which amounted to (0.029) and (0.003), respectively, which is less than (0.05).Also there is an inverse correlation between (movement and transition) and each of (monthly income) and (the date of the kidney transplant), respectively, in terms of the value of the rank correlation coefficient, whose value amounted to (-0.411) and (-0.517), respectively, and that this The relationship is significant in terms of the probability value associated with the correlation coefficient, which amounted to (0.011) and (0.007), respectively, which is less than (0.05).There is a direct correlation between (nutrition) and each of (Age) (education level) and (Number of kidney transplant), respectively, in terms of the value of the rank correlation coefficient, whose value amounted to (0.427), (0.644) and (0.419). Respectively, this relationship is significant in terms of the probability value associated with the correlation coefficient, which amounted to (0.028), (0.000) and (0.043), respectively, which is less than (0.05).

Table (1): Demographical characteristic of the study sample

Variables		F	%
Age	From 21 – 30 year	86	28.7
	from 31 – 40 year	74	24.7
	From 41 – 50 year	73	24.3
	from 51 – 60 year	48	16.0
	From 61 years and over	19	6.3
Total		300	100.0
Gender	Male	215	71.7
	Female	85	28.3
Total		300	100.0
Residence	Urban	206	68.7
	Rural	94	31.3
Total		300	100.0
Marital status	Single	82	27.3
	Married	209	69.7
	Divorced	3	1.0
	Widow	6	2.0
Total		300	100.0
Occupation	Retired	33	11.0
	Civil work	93	31.0
	Functionless	39	13.0
	House wife	63	21.0
	Employed	52	17.3
	Student	16	5.3
	Others	4	1.3
Total		300	100.0
Educational level	Unable to read and write	16	5.3

	Read and write	24	8.0
	Primary school	116	38.7
	Intermediate school	58	19.3
	Secondary school	23	7.7
	Institution	18	6.0
	College and above	45	15.0
Total		300	100.0
Monthly income	less than 250,000-500,000	226	75.3
	from 500,000-750,000	41	13.7
	From 750,000-1000,000	17	5.7
	from 1000,000-1250,000	9	3.0
	From 1250,000-1500,000	4	1.3
	1500,000 or more	3	1.0
Total		300	100.0
Chronic diseases	Diabetes	46	15.3
	Hypertension	144	48.0
	Arthritis	15	5.0
	Atherosclerosis	7	2.3
	Anemia	11	3.7
	Other disease	59	19.7
The date of the first kidney transplant	Less than 12 months	44	14.7
	12-36 months	89	29.7
	37-72 months	63	21.0
	72 months or more	104	34.7
Total		300	100.0
The Number of kidney transplants	At one time	292	97.3
	Twice	8	2.7
Total		300	100.0

Table (2): Distribution of patient in terms of level of independence

N	Name	mean	Sd.	Rank
1	Movement, transition and completion of duties	2.3794	0.32344	4
2	Medication	3.6900	0.39189	1
3	Nutrition	3.3883	0.42844	3
4	Environment	3.4333	0.40602	2

Table (3): statistics relationship between quality of life, independence aspect and sociodemographic variables.

		Age	Gender	Residence	Marital status	Occupation	Education level	Monthly income	The date of the kidney transplant	Number of kidney transplant
Movement	Corr.	.426*	.044	.063	.087	.080	.044	-.411*	-.517**	.513**
	P-value	.029	.448	.276	.131	.170	.452	.011	.007	.003
Medication	Corr.	.046	.017	.044	.038	.042	.009	.065	.011	.080
	P-value	.428	.769	.449	.515	.470	.873	.262	.851	.165
Nutrition	Corr.	.427*	.017	.084	.028	.045	.644**	.031	.107	.419*
	P-value	.028	.767	.147	.628	.186	.000	.421	.064	.043
Environment	Corr.	.431*	.009	.053	.041	.000	.033	.018	-.045	.427*
	P-value	.039	.878	.356	.481	.996	.568	.752	.442	.023

DISCUSSION

By reviewing table (1) for socio-demographic characteristics it reveals that (28%) for (21-30) and (24%) for (31-40) and (41-50) age groups alternatively, the next variable gender shows a majority to be has (71.7%) for male patients, while the residence refers to (68.7%) for urban, the marital status shows (69.7%) for married, the occupation most of them recorded a rate (31%) to be civil work, next educational level recorded a rate of (38.7%) to be primary school, later the annual income recorded a rate of (75.3%) has less than 250,000-500,000 for sufficient money, other comorbidity disease high percentage is (48%) of hypertension, finally for the date of the first kidney transplant the largest percentage (72 months or more) to be (34.7%), for the number of kidney transplants, the highest percentage was (at one time) to be (97.3%). these findings were based on nonhomogeneous patient groups with various transplanted organs, large differences in patient outcomes, type of adverse events, graft survivals, and administered immunosuppressive regimen. (Fiebiger et al., 2004). In a cross-sectional study, [8] revealed that patient-reported treatment side effects and recent hospitalizations were the most significant predictors of worse HRQOL. [9]. This study shows that hypertension associated with physical functioning, role-physical, bodily pain, general health, and social function. These results provide additional evidence that among middle-aged hypertensive people, hypertension has a considerable impact on health-related quality of life. In order to determine whether there are any correlations between physical functioning, role-physical pain, overall health, vitality, and social function and hypertension in hypertensive individuals, further longitudinal research is necessary. [10].

In order to explore the level of independence in the table (2) for movement, transition and completion of duties aspect in kidney transplant patients by using frequency, mean, and st.d and significant difference which means that most kidney transplant patients have the same complain of transfer and mobility to center caused by difficulties related to center situation and distance which contributes to patient suffering that most of them later exhausted. These findings concomitant with [11]. survival of pediatric kidney transplant recipients has improved over the past six decades. However, of all age groups, teenagers and young adults continue to have the greatest rates of transplant failure. In order to ensure the effective integration of young people into adult life and the ultimate transfer of care and management to adult transplant facilities, there is an increasing demand for well-designed transition programs.

Also to review the level of independence domain according to medication by the frequency, mean, st.d. This can indicate that most patients had experienced dependency on medication that they used after kidney transplant and this agreed with the cross sectional study on 210 patients who have kidney transplant by [12]. who reached similar results of the association between extensive adjustment and dependence on medication after kidney transplant.

Nutrition in kidney transplant is an aspect that demonstrated that all kidney transplant patients had a changes in their quality of life by restricting food and fluid which may affect other systems to be basic elements for the change of renal function. This finding agrees with the study of [13] which found that nutrition is an important element in predicting kidney transplant patient outcomes.

Environment aspect of level independence domain by frequency , mean and st.d which indicates that the patients have kidney transplant are totally depended on the change of environment aspect physically , emotionally and management and need help in every time of disease process. This finding copes with[14].Environmental factors, anticipated sickness severity levels, and behavioral compliance measures can all have an impact on how well someone is able to live following a kidney transplant.

To ensure the presence or relation between socio- demographic characteristic for kidney transplant patient and quality of life among them for table (3) which demonstrate statistical difference in independence domain . There is a direct correlation between (movement,transition and completion of duties) and each of (Age), (Number of kidney transplant), respectively, in terms of the value of the rank correlation coefficient, whose value amounted to (0.426) and (0.513), respectively, and that this relationship is significant in terms of the probability value.The accompanying correlation coefficient, which amounted to (0.029) and (0.003), respectively, which is less than (0.05). There is an inverse correlation between (movement ,transition and completion of duties) and each of (monthly income) and (the date of the kidney transplant), respectively, in terms of the value of the rank correlation coefficient, whose value amounted to (-0.411) and (-0.517), respectively, and that this relationship is significant in terms of the probability value associated with the correlation coefficient, which amounted to (0.011) and (0.007), respectively, which is less than (0.05).Another relationship is a direct correlation between (nutrition) and each of (Age), (education level) and (Number of kidney transplant), respectively, in terms of the value of the rank correlation coefficient, whose value amounted to (0.427), (0.644) and (0.419). Respectively, this relationship is significant in terms of the probability value associated with the correlation coefficient, which amounted to (0.028), (0.000) and (0.043), respectively, which is less than (0.05). There is a direct correlation between (environment) and each of (Age), (Number of kidney transplant), respectively, in terms of the value of the rank correlation coefficient, whose value amounted to (0.431) and (0.427), respectively, and that this relationship is significant in terms of the probability value. The accompanying correlation coefficient, which amounted to (0.039) and (0.023), respectively, which is less than (0.05).This finding agrees with a study done by[15].Functional independence in more basic self-care activity of daily living (ADL) was associated with better KT access and lower waitlist mortality. Screening KT candidates for ADLs and identifying treatments to foster independence and enhance waitlist outcomes are tasks that nephrologists, geriatricians, and transplant surgeons should perform.ADLs represent more basic self-care activities compared with the more complex self-care instrumental activity of daily living(IADL), which require higher levels of functional ability .

CONCLUSIONS

The current study concludes the following The main domain and sub-domains of quality of life have strong positive or negative relationships with what the sickness may have left behind and study showed that the improvement in HRQOL obtained after KT is linked to the previous dialysis modality, with PD patients benefiting the most.

ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

Approvals was obtained from an ethical committee from the university of Mosul/Collage of Nursing ,the Nineveh Health Department ,and Inb-Sina teaching hospital ,according to administrative books .

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AUTHORS CONTRIBUTION

All authors contributed to the study concept ,writing, and reviewing of the final edition .

DISCLOSURE STATEMENT

The authors declare no conflicts of interest.

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