Assessment of life orientation among patients with hemodialysis

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تقييم التوجه نحوالحياة لدى مرضى الفشل الكلوي

طالب الماجستير:علي امازي غالي/ممرض جامعي في مستشفى الرفاعي العام في محافظة ذي قار

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**أستاذ مساعد دكتور: أياد ماجد موسى / كلية التمريض، جامعة بغداد. دكتوراه في الفلسفة أستاذ (مساعد)، قسم أساسيات التمريض

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الملخص:

تستكشف الدراسة تقييم التوجه الحياتي بين المرضى اللذين يخضعون لغسيل الكلى, مع التأكيد على دوره الحاسم في سلامتهمالنفسية وادارة العلاج. يتطور مرض الفشل الكلوي الى مراحله النهائية مما يتطلب علاجات للحفاظ على الحياة مثل غسيل الكلى. التفاؤل الذي تم قياسه بأستخدام مقياس التوجه نحو الحياة هو عامل حاسم في كيفية تعامل المرضى مع تحديات حالتهم. شملت الدراسة ١٦٧ مريض من مرضى غسيل الكلى من مستشفى الحسين التعليمي ومستشفى الرفاعي التعليمي في محافظة ذي قار في العراق, لتقييم خصائصهم الديموغرافيه ومستويات توجهاتهم الحياتية. اشارت النتائج الى ان المرضى عموما اظهرو مستويات معتدلة من التفاؤل, مع وجود اختلافات كبيرة بناءا على الخلفية التعليمية ومدة الفشل الكلويوالغسيل الكلوي. ارتبطت المستويات الاعلى من التفاؤل بالالتزام الافضل بالعلاج وتحسين نتائج الصحة العقلية. وتؤكد النتائج على اهمية دمج التقييمات النفسية في رعاية مرضى غسيل الكلى لتحسين جودة حياتهم بشكل عام ونتائج

العلاج. يمكن ان تركز الابحاث المستقبلية على الدراسات الطويلة لاستكشاف الطبيعة الديناميكية للتفاؤل وتأثيره على نتائج المرضى بمرور الوقت.

الكلمات الرئيسية: غسيل الكلى, المرحلة النهائية من مرض الفشل الكلوي, التوجه نحو الحياة, التفاؤل, الصحة النفسية.

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ABSTRACT:

The study explores the assessment of life orientation among patients undergoing hemodialysis, emphasizing its critical role in their psychological well-being and treatment management. Renal failure, influenced by conditions such as diabetes and hypertension, progresses to end-stage renal disease (ESRD) , necessitating life-sustaining treatments like hemodialysis. Optimism, measured using the Life Orientation Test-Revised (LOT-R), is a key determinant in how patients cope with the challenges of their condition. The study involved 167 hemodialysis patients from Al-Hussein Teaching Hospital and Al-Rifai General Hospital in Dhi Qar Governorate, Iraq, assessing their demographic characteristics and life orientation levels.

Results indicated that patients generally exhibited moderate levels of optimism, with significant variations based on educational background, presence of other chronic diseases, and duration of kidney failure and hemodialysis. Higher levels of optimism correlated with better treatment adherence and improved mental health outcomes. The findings underscore the importance of integrating psychological assessments into the care of hemodialysis patients to enhance their overall quality of life and treatment outcomes. Future research could focus on longitudinal studies to explore the dynamic nature of optimism and its impact on patient outcomes over time.

Keywords: Hemodialysis, end-stage renal disease, life orientation, optimism, psychological well-being.

Introduction:

Renal failure is a significant health issue projected to rise due to the increasing prevalence of risk factors like diabetes, smoking, obesity, hypertension, and an aging population (Shahgholian and Yousefi, 2015; Al-Khafaji and Al-Mayahi, 2023; Hussein and Ahmed, 2020).

This condition occurs when the kidneys are unable to eliminate the body's metabolic wastes or perform their regulatory functions (Hameed and Sachit, 2018).

Renal failure progresses through five stages, with the final stage known as end-stage renal disease (ESRD), where kidney function drops to less than 15% of normal (Kadhum and Mohammed, 2012). At this critical stage, renal replacement therapies such as hemodialysis, peritoneal dialysis, and kidney transplantation become necessary to sustain life (Caskey et al., 2011; Al-Gersha, 2008).

Assessing life orientation among patients undergoing hemodialysis is crucial for understanding their overall well-being and managing their treatment effectively. Life orientation, primarily characterized by levels of optimism and pessimism, significantly influences how patients cope with the physical and emotional challenges of long-term treatments such as hemodialysis (Masood et al., 2017).

Optimism, which denotes a positive expectation of future outcomes, is linked to better health outcomes and improved quality of life in patients with chronic illnesses. Conversely, pessimism can result in poorer health outcomes and increased psychological distress. Therefore, assessing life orientation in hemodialysis patients offers valuable insights into their mental and emotional states, aiding healthcare providers in tailoring interventions to enhance their well-being (Janssens et al., 2024).

Several tools and questionnaires, such as the Life Orientation Test-Revised (LOT-R), have been developed to assess life orientation. The LOT-R measures an individual's generalized expectancy for positive versus negative outcomes and can be administered to gauge levels of optimism or pessimism. High levels of optimism are associated with better adherence to treatment regimens, lower levels of depression and anxiety, and overall improved health status (Scheier et al., 1994).

Research indicates that interventions aimed at enhancing optimism, such as cognitive-behavioral therapy and positive psychology exercises, can significantly benefit hemodialysis patients. These interventions help patients develop a more positive outlook, improving their ability to manage the demanding nature of their treatment and enhancing their overall quality of life (Seligman et al., 2005).

In summary, assessing and addressing life orientation among hemodialysis patients is vital for providing holistic care. By understanding and fostering optimism, healthcare providers can help mitigate the negative psychological impacts of hemodialysis, thus improving patients' quality of life and treatment outcomes. Integrating psychological assessments and interventions into the routine care of patients with ESRD supports their comprehensive health needs (Masood et al., 2017).

Material and Methods:

Research design and samples

A quantitative non-experimental descriptive cross-sectional study design has been carried out where using an evaluation approach from (4 January 2024 to 4 March 2024).

Ethical Considerations

The study was conducted following stringent ethical guidelines to safeguard the integrity and well-being of all participants. Prior to commencing the research, ethical approval was obtained from the Research Ethics Committee of the College of Nursing, University of Baghdad.

The setting of the study

The study was conducted at Al-Hussein Teaching Hospital and Al-Rifai General Hospital in Dhi Qar Governorate.

Population: The population selection for the study was patients with renal failure in Al-Hussein Teaching Hospital and Al-Rifai General Hospital Dhi Qar Governorate.

Sample Size

The total patients in the Al-Hussein Teaching Hospital and Al-Rifai General Hospital were (400) and the sample size in this study was (167) patients selected from the total patients at Al-Hussein Teaching Hospital and Al-Rifai General Hospital. According to calculating of minimum sample size based on a confidence level 95% and margin of error 5% the sample size must not be less than (196 patient) to be sample size represent to the population size. Where there are three questionnaires were excluded outside the representative sample size due to a lack of answers to the questionnaire completely.

The Study Instrument

-Part one: Socio-demographic;

This part includes (age, gender, marital status, Level of education, Occupation, Income, Another chronic disease, Number of hemodialysis per week, Period of kidney failure, and Period from start hemodialysis) to assess Socio-demographic for patients with renal failure.

-Part two: Life Orientation Test (LOT-R):

The researcher used a scale contain a 10-item represent to 5-point Likert scale to assess life orientation for patient with renal failure. where Each item is measured on a 5-point scale ranging from Strongly Agree (5) to Strongly Disagree (1). Cronbach's alpha was used to confirm the tool's reliability, and it came out at (0.890) Life orientation scale has been options (10items) the percentage of the score for each item was calculated; a higher percentage mean a more positive orientation (positive ≥ 50 for correct answer), while a lower percentage indicated a negative orientation (negative ≤ 50 for correct answer).on ranging from (1 -3) mean Negative Life Orientation while (3.01 -5) mean Positive Life Orientation.

Data Collection

Before starting, the researcher wore personal protective equipment in order to prevent the risk of acquiring infection and preventing its transmission to the staff and patients in the center. The researcher met with the patients in Al-Hussein Teaching Hospital and Al-Rifai General Hospital to obtain their consent to participate in the study and to clarify The objectives of the study, and after the researcher obtained the consent of the participants. Moreover, the data collection process began as of (20th January 2024 to 4th March 2024) in order to achieve the goals study.

Data was collected through the use of the Arabic version questionnaire the data was collected in a unified self-report questionnaire that includes two parts. The first part included socio-demographic data, and the second part included Life Orientation Test (LOT-R) for patients with hemodialysis in Dhi Qar Governorate, Al-Hussein Teaching Hospital, and Al-Rifai General Hospital.

Data Analysis

Analyzing data is an essential step in nursing research, wherein various methods are employed to describe and assess information gathered by the researcher. The choice of analysis method depends on the nature of the collected data, with quantitative research specifically utilizing descriptive and inferential statistics to analyze numerical data. (O’Connor, 2020)

The data were analyzed through use of the application of Statistical Package for Social Sciences (SPSS), version 26.0.

RESULTS:

Table 1: Distribution of the Participants According to their socio demographic data Characteristics:

Demographic Characteristics	Subgroup	f.	%
Age group	20- 40 years	40	24.0
	41- 60 years	92	55.1
	≥61 years	35	21.0
	Total	167	100.0
	Mean ± SD 50.84 ± 13.085 Min- Max 20 - 83 years		
Sex	Male	117	70.1
	Female	50	29.9
	Total	167	100.0
Educational level	Primary	41	24.6
	Secondary	56	33.5
	Diploma	28	16.8
	Bachelors	42	25.1
	Total	167	100.0
Occupation	Free business	44	26.3
	Employee	23	13.8
	Retired	38	22.8
	Unemployed	62	37.1
	Total	167	100.0
Marital status	Married	140	83.8
	Single	15	9.0
	Divorce	2	1.2
	Widow	10	6.0
	Total	167	100.0
Income	Enough	20	12.0
	Nearly enough	99	59.3
	Not enough	48	28.7
	Total	167	100.0
Another chronic disease	With	155	92.8
	Without	12	7.2
	Total	167	100.0
Number of hemodialysis per week	Once	10	6.0
	Twice	87	52.1
	Three times	70	41.9
	Total	167	100.0
Period of kidney failure	< One years	57	34.1
	1- 4 years	103	61.7
	≤5 years	7	4.2

	Total	167	100.0
	Mean ± SD 2.14 ± 1.446 Min- Max 4 months - 10 years		
Period from start hemodialysis	< One years	85	50.9
	1- 4 years	79	47.3
	≤5 years	3	1.8
	Total	167	100.0
	Mean ± SD 1.61 ± 1.293 Min- Max 1month - 10 years		

f= frequencies, %=Percentages, M = Mean of score, S.D = Standard Deviation, Min= minimum and Max= maximum

In table 2 the results showed the age for 167 kidney failure patients from 20 to 83 years at most (55.1%) from 41 to 60 years with mean 50.84 years. Regarding the sex, the most (70.1%) of the participants were male and the majority (83.8%) were married. According to the educational level the most (33.3%) were complete secondary school. The results also shown the most (37.1%) of the participants were unemployed and the most (59.3%) with nearly enough monthly income. Also the results shown the majority (92.8%) of the participants have another chronic disease. And shown period of kidney failure at most (61.7%) from 1 to 4 years with mean 2.14 years and the period from start hemodialysis at most (50.9%) less than one year.

Table 2: Evaluation of Life Orientation Test (LOT-R):

Items	%					Mean	Eva.
	Never	Rarely	Sometime	Often	Always		
1. In uncertain times, I usually expect the best.	3	12	25.7	49.7	9.6	3.51	M
4. I'm always optimistic about my future.	1.8	4.2	28.7	45.5	19.8	3.77	H
10. Overall, I expect more good things to happen to me than bad	0.6	3	5.4	44.3	46.7	4.34	H
Optimism (3 Positive questions)						**3.87**	**H**
3. If something can go wrong for me, it will.	1.2	9.6	30.5	32.3	26.3	2.27	M

7. I hardly ever expect things to go my way.	0	2.4	49.7	41.3	6.6	2.48	M
9. I rarely count on good things happening to me.	2.4	6	49.1	37.1	5.4	2.63	M
Pessimism (3 Negative questions and reversed to positive)						**2.46**	**M**
2. It's easy for me to relax.	1.8	19.8	43.1	32.3	3	3.15	M
5. I enjoy my friends a lot.	1.2	12.6	28.7	42.5	15	3.57	M
6. It's important for me to keep busy.	2.4	14.4	40.7	32.3	10.2	3.34	M
8. I don't get upset too easily.	1.2	24.6	37.7	31.7	4.8	3.14	M
Fillers (Not scored)						**3.30**	**M**
LOT (6 questions)						**3.16**	**M**

%= percentage, Eva. = Evaluation, L = low Optimism (1 – 2.33), M = Moderate Optimism (2.34 - 3.66) and H= High Optimism (3.67 - 5).

The results in table 2 showed the Life Orientation level for kidney failure patients were moderate optimism with mean 3.16 (Min- Max 1-5).

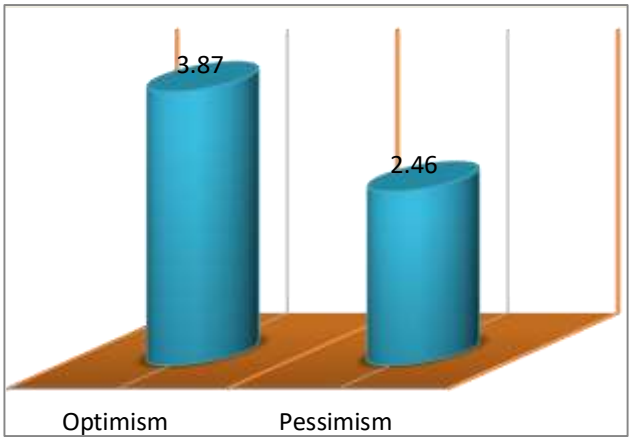

Figure (1): A Life Orientation level.

Table 3: The relationship between life orientation with participants' sociodemographic characteristics. :

Demographic Characteristics	Subgroup	Life Orientation		
		M	Analysis	p. value
Age	20- 40 years	3.19	Cc= -.100-	.198
	41- 60 years	3.21		
	≥61 years	3.01		
Sex	Male	3.19	t= 1.246	.215
	Female	3.10		
Educational level	Primary	2.99	F= 3.869	.010
	Secondary	3.17		
	Diploma	3.20		
	Bachelors	3.31		
Occupation	Free business	3.20	F= 1.805	.148
	Employee	3.34		
	Retired	3.09		
	Unemployed	3.12		
Marital status	Married	3.21	F= 2.597	.054
	Single	2.99		
	Divorce	2.75		
	Widow	2.95		
Income	Enough	3.26	F= 2.771	.066
	Nearly enough	3.21		
	Not enough	3.04		
Another chronic disease	With	3.14	t= -2.275-	.024
	Without	3.44		
Period of kidney failure	< One years	3.25	Cc= -.162-	.036
	1- 4 years	3.12		
	≤5 years	3.10		
Period from start hemodialysis	< One years	3.23	Cc= -.172-*	.026
	1- 4 years	3.12		
	≤5 years	2.67		
Number of hemodialysis per week	Once	3.38	F= 1.993	.140
	Twice	3.19		
	Three times	3.10		

P=probability value, NS: Non-Significant at P > 0.05, S: Significant at P < 0.05, HS: Highly Significant at P < 0.001.

In table 3 the results showed there were significant statistical differences between life orientation with their educational level and another chronic disease at P < 0.05. Also the results shown there were significant statistical negative correlation with participants period of kidney failure and period from start hemodialysis at P < 0.05.

DISCUSSION:

Discussion of the Socio-Demographic Characteristics of the Study Sample, as shown in (Table 1)

Regarding socio-demographic characteristics which are presented in Table (1), the results showed the age for 167 kidney failure patients from 20 to 83 years at most (55.1%) from 41 to 60 years with mean 50.84 years.

Regarding the sex, the most of the participants was male, this result agree with studies done by (Mohammed,2016; Hussein and Hattab 2023), While disagree with studies done by(Zhamis and Abed, 2023; Ghayadh and Naji, 2023; Hermis and Abed, 2021)

and the majority (83.8%) was married. Moreover, this finding was supported by Yalcinkaya Alkar & Karanci, (2014) who illustrated in their study about Examination of the sample characteristics show that 61,3% were male, and 76,4% were married.

According to the educational level the most (33.3%) were complete secondary school. Moreover, this result is confirmed by Isdiarti and Ardian (2020),who found that (40.0%) passed only elementary level of education.

The results also shown the most (37.1%) of the participants were unemployed and the most (59.3%) with nearly enough monthly income. this result is confirmed by Asiri et al., (2023) stated that the total of 58.6% of patients were unemployed, 21.6% were employed.

Also the results shown the majority (92.8%) of the participants have another chronic disease. Consistently, period of kidney failure shown at most (61.7%) from 1 to 4 years with mean 2.14 years and the period from start

hemodialysis at most (50.9%) less than one year with mean 1.61 year. The study result is consistent with the study done by (Asiri et al., 2023), that demonstrated that the Duration of hemodialysis was <5 years among 41.4% of patients, and ≥10 years in 21% ,and the period from start hemodialysis at most (55.8%) less than one year with mean 1.98 year.

Distribution of a Life Orientation Test (LOT-R) for patients with hemodialysis, as Shown in Tables (2) and Figure (1):

The results in table 4 showed the Life Orientation level for hemodialysis patients were positive with mean 3.16 (Min- Max 1-5).

Life orientation was measured as a trait-like predisposition, but the findings showed that rather than being a consistent personality trait, it appeared to be more as an outcome of recipients' life experiences that determined their attitude towards self, others and life in general instead of being a personality trait. The past experiences tend to affect their present evaluations and future aspirations. 'Optimism' is considered a measure of their attitude and approach towards life, to find how experiences rather than an enduring personality trait.

The finding was supported by Masood et al., (2017) who stated cross sectional survey research design to investigate the phenomenon of life-orientation, subjective well-being, social support and perceived health related quality of life in patients with end stage renal disease. The sample comprised of 200 respondents from both gender, equally distributed within the age range of 50 to 60 years, going through last stage of ESRD and relying on dialysis from at least past one year or more. Indigenously translated WHO QoL, Subjective Wellbeing Scale, multidimensional Social Support Scale, Life Orientation Scale and a demographic information sheet was used to collect the data. Results: The results revealed that life orientation, social support and subjective well-being significantly and positively predicted the health related quality of life; greater social support and higher levels of subjective wellbeing after controlling for the effects of age, gender, income and education were found when the patients 'carried optimistic and positive life-orientation.

Other study done by (Kamran & Schaw, 2017), conducted A longitudinal study was carried out on renal transplant recipients with a healthy kidney functioning in Lahore, Pakistan, to find out how recipients' life orientation influences their perceptions of physical health status. Perceived Health Status (PHS) was measured by a self-developed questionnaire that reflected the symptom severity and frequency measured by the common immune-suppressant side effects. Life Orientation Test-Revised (LOT-R;

Scheier, Carver, & Bridges, 1994) was used to measure optimism. It was found that most recipients tend to have an optimistic attitude and a positive perception of their health status. Although both PHS and optimism were found to be significant predictors of each other, however, it was clarified that recipients' with a better PHS, that is, healthy graft functioning tend to be more optimistic because of their improved health status.

(Kamran & Ogden, 2016) This qualitative study was carried out to explore recipients' perceptions and transitions concerning their personality and life orientation as a consequence of a major surgical experience. A thematic analysis revealed that transplantation brought positive changes in their psychological well-being. Participants tended to have an optimistic attitude towards life focus regarding past, present and future plans & concerns. The themes explaining these transitions included; 'post traumatic growth' as indicated by an optimistic attitude & personal growth' as a consequent impact of transplant, 'gratitude', 'emotional morbidity' and 'transplant related fears, anxieties & uncertainty' about possible future consequences & risk vulnerability and future concerns.

Publishing and Kamran, (2014) conducted The longitudinal study was carried out to find the impact of optimism (life orientation) on perceived Quality of life among renal transplant recipients (RTRs) to see if optimism increases subjective QoL. The findings revealed a significant positive correlation between optimism and perceived QoL, suggesting that optimist recipients tend to be more satisfied with their overall life post- transplant.

The relationship between life orientation with participants' sociodemographic characteristics for patients with renal failure, as Shown in Tables (3)

In table 8 the results showed there were significant statistical differences between life orientation with their educational level and another chronic disease at $P < 0.05$. Also the results shown there were significant statistical negative correlation with participant's period of kidney failure and period from start hemodialysis at $P < 0.05$**.** previous studies were confirmed with the current research findings done by Masood et al., (2017), mentioned that The results revealed that life orientation significantly and positively predicted for the effects of age, gender, educational level and another chronic disease at $P < 0.05$.

These findings are confirmed by a study done by Li et al., (2023) that mentioned that the significant statistical negative correlation with participant's period of kidney failure at $P < 0.05$ **.in addition, this finding was on line with other previous study done by** (Publishing & Kamran, 2014)**,**That

mentioned the findings revealed the a significant positive correlation between optimism(life orientation) suggesting that optimist recipients tend to be more satisfied with their overall life post- transplant. Recipients did not differ in levels of optimism on the basis of gender, marital status, education, financial conditions and time since transplantation. Age was the only demographic factor found to be negatively associated with optimism, suggesting that optimism decreases with increasing age.

Conclusion

This study focused on assessing life orientation among hemodialysis patients, highlighting its crucial role in influencing their psychological well-being and coping mechanisms. Renal failure, exacerbated by conditions like diabetes and hypertension, progresses to end-stage renal disease (ESRD) , necessitating life-sustaining treatments such as hemodialysis. The findings revealed that optimism, as measured by the Life Orientation Test-Revised (LOT-R), significantly impacts patients' ability to manage the challenges associated with their treatment regimen. Patients generally exhibited moderate levels of optimism, which correlated with factors such as educational background, presence of other chronic diseases, and duration of kidney failure and hemodialysis. These insights underscore the importance of integrating psychological assessments into routine care for hemodialysis patients, aiming to enhance their overall quality of life and treatment adherence.

Recommendations

The study recommends to:

1- The importance of integrating psychological assessments into the care of hemodialysis patients to enhance their overall quality of life and treatment outcomes.

2- Future research could focus on longitudinal studies to explore the dynamic nature of optimism and its impact on patient outcomes over time.

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