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QUALITY OF LIFE , COMPLIANCE AND SATISFACTION FOR PATIENTS WITH PERITONEAL DIALYSIS AT QASSIM REGION IN KSA

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Abstract

Background : Patients on dialysis live in a state-owned of prolonged stress are faced with a steady impression of death, diminish their life expectancies, tolerate a strict dietary schedule, and undergo disturbing treatments . The daily scuffle with end-stage renal disease symptoms and co morbidities, accompanied by the need to cope with psychosocial stressors, directly affects patients' quality of life and mental health . **Aim:** To Identify quality of life , compliance and satisfaction for patients with peritoneal dialysis in Qassim region at Kingdom Saudi Arabia. **Methods:** A cross-sectional descriptive study design was used to conduct the study Convenience samples of 52 peritoneal Patients (male and females) were selected from conducted in dialysis centre in three of the King Fahd Specialist Hospital, Buraydah in the Qassim region, KSA . Tools of Data collection include four parts based on a review of relevant recent literature and adapted from **Okpechi et al.,2013** and **Fadem et al., 2011** regarding assessment of socio-demographic characteristics , investigation values and quality of life dimensions and compliance (physical, social, psychological , spiritual and educational) and satisfaction level. **Results:** this study revealed that there was a highly significant relation between peritoneal patients satisfaction and their quality of life (p=0.001) in the items related to daily life and overall quality of life scores . while there are a significant relation were found between daily activities and quality of life (p=0.002, 0.013) in the items related to marital status respectively . **Conclusions**: There was a highly significant relation between patient's sociodemographic data and their quality of life in the items related to job type. While there are a significant relation were found between daily activities and quality of life in the items related to marital status, educational levels , job type and income levels .**Recommendations:** More researches to evaluate the effect of intervention program for more evidence that would be helpful for enhance patients 'adaptation and quality of life for peritoneal dialysis patients. Strengthening for implementing instructional scheme regarding peritoneal dialysis and its management in order to increase satisfaction and quality of life among those patients.

Key words: Quality of life, Compliance, Satisfaction, Peritoneal dialysis

Introduction

Patients who undergo chronic diseases may develop emotional distress, which in turn may restrict the behaviour and the cognitive and social purposes, encouraging specific and non-specific biological reactions that affect the treatment modalities. Nevertheless, Patients on dialysis live in a state-owned of prolonged stress are faced with a steady impression of death, diminish their life expectancies, tolerate a strict dietary schedule, and undergo disturbing treatments [2].

Chronic kidney disease and the methods of its treatment play an important part in shaping the QoL of patients receiving dialysis. As a result, kidney failure causes many limitations in patients' physical, mental, and social activities which affect their needs [3].

The prevalence of kidney disease is rising and there are now over 11 400 Australians receiving dialysis. A multiple co morbid illnesses and drug clearance by dialysis all complicate prescribing [4]. In the US each year approximately 660,000 persons affects with End stage renal disease (ESRD), representing a significant financial burden to the health care system and affected individuals [5,6].

Despite advancements in renal replacement therapies and increased survival, patients still face several physical, psychological and social limitations as consequences of chronic kidney disease and treatment complexity. The daily scuffle with end-stage renal disease symptoms and co morbidities, accompanied by the need to cope with psychosocial stressors, directly affects patients' quality of life and mental health [7].

Moreover, Patients' satisfaction assessment is becoming an important indicator of health care outcomes and considers as evidence for better patient satisfaction, it might be associated with better medical outcomes. Furthermore it may be a very effective indicator to measure the success of health care team especially in dialysis unit when deal with chronic patient undergoing hemodialysis therapy [8].

Peritoneal dialysis (PD) patients at home require much more than just clinical management. Social and psychological support and outcomes are important for all age groups. Nurses are responsible for ensuring prevention of technique failure due to infections and supporting patients with restrictions imposed by the therapy. The burden of dialysis is well documented in various studies as it affects an individual's social and psychological well-being [12,13].

Significance of the study:

A key goal of improving quality of care is to enhance quality of life, a patient-important quality measure that matters more too many patients than even survival. Self-management and ongoing support, as with any long-term condition, need to be part of the decision-making process, and the philosophy of improving self-efficacy should be integral. Many patients have multiple morbidities, all of which can impact on their physical and mental health, affecting disability and ability in performing activities of daily life. Furthermore , One of the most important aspects is a full assessment of the patient, including physical and psychosocial needs, motivation to learn, reading level, barriers to learning, learning styles, family support, home circumstances, and consideration of nursing homes [13].

The number of patients who go through dialysis as a consequence of end-stage renal diseases is still increasing through the years (***Almousa et al.,2021***) [14].

Dialysis treatment is known to lead to reduced quality of life (QOL) among patients. This decreased QOL is believed to influence medication compliance, although this effect has not yet been clarified (***Nagasawa et al .,2018***) [15].

Aim of the Study:

The aim of this study was to identify quality of life , compliance and satisfaction for patients with peritoneal dialysis in Qassim region at Kingdom Saudi Arabia

Research Questions:

1. What's the level of Quality of life among patients with peritoneal dialysis?
2. Is there a relationship between sociodemogrraphic data , daily activities , adaptation , Quality of life and satisfaction among patients with Peritoneal dialysis ?

Conceptual framework:

Health promotion during lifestyle enhancement may be avitalsubject material that has received significant attention from scientific community all over the world. The Pender model focuses on three areas of health promotion: individual characteristics and experiences. Perception, specific behavioral effect, and behavioral outcomes (***Masoudi et al.,2020***) [17].

SUBJECTS AND METHODS

Study design:

A cross-sectional descriptive study design was used during this study

Study Settings:

This study will be conducted in dialysis centre in three of the King Fahd Specialized Hospital, Buraydah in the Qassim region, KSA

Study population:

The study will take 12 months which data collection at least 4 months.

Inclusion Criteria:

- All available patients assigned for peritoneal dialysis on the time of data collection with any types of peritoneal dialysis : Continuous Ambulatory Peritoneal Dialysis (CAPD) or Automated Peritoneal Dialysis (APD)
- Patients willing to participate

Exclusion criteria:

- Patients with haemodialysis
- Patient with peritoneal dialysis complications, e.g. (Surgical site infection, Anastomotic leakage) .
- Patients unable to communicate

Sample size and Technique:

A nonprobability convenience sample that included all available peritoneal patients on the time of data collection will be utilized for selecting the participants in the current study. Peritoneal dialysis patients approximately 154 flow rates in the Al-Qassim region. After estimation of a 95% confidence interval , 80% test power, and a 5 % dropout rate. EpiInfo version 7.2.5.0 determined the sample size to be 52 patients with peritoneal dialysis using Raosoft®, Inc. software. **(Alkhuwaiter et al.,2020)** [9].

Data collection methods and study tools:

Data will be collected using online questionnaires due to work schedules. The questionnaire will be consisted of four parts including: Firstly, the demographic data which includes 15 items related to patient's personal information such as age, gender, level of education, marital status, causes of peritoneal dialysis , duration of dialysis , type of peritoneal dialysis , duration of dialysis session , patients experience with comorbid diseases , family history of diseases . Second part comprises of 40 questions adapted from **Okpechi et al.,2013** [16].to identify the following quality of life dimensions and compliance (physical, social, psychological , spiritual and educational) for peritoneal dialysis patients ,etc…..Third part includes 26 items adapted from **Fadem et al., 2011**[17]., to assess a satisfaction level with the aim in mind to predict coping with daily hassles after experiencing all kind of stressful life events added to difficulties of the dialysis . Patients will be classified as very satisfied, satisfied, neutral, unsatisfied, and very unsatisfied. Finally the fourth part is a modified tool from **Okpechi et al.,2013** [16].to assess the patient's investigations results as calcium , iron , ferritin and albumin levels and assess problems and complains as swelling, headache, anorexia, obesity, lethargy. This study will be authorized by participant's consent.

Pilot study will be carried out after the development of the tools on 10% of the peritoneal patients to test applicability of the tools then necessary modification were done according to the results of the results of pilot study and expertise opinions. The purposes of pilot study are to test the applicability of the study tools, and to estimate any need for addition in the tool. Otherwise, the patients will then excluded from the sample of research work to assure the stability of answers

Data management and Analysis plan:

Statistical analysis of the data

Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp) Qualitative data were described using number and percent. The Kolmogorov-Smirnov test was used to verify the normality of distribution Quantitative data were described using range (minimum and maximum), mean, standard deviation and median Significance of the obtained results was judged at the 5% level. The used tests were : Fisher Exact test for test Correction for chi-square when more than 20% of the cells have expected count less than 5 ; Student t-test for normally distributed quantitative variables, to compare between two studied groups ; F-test (ANOVA) for normally distributed quantitative variables, to compare between more than two groups ;Pearson coefficient to correlate between two normally distributed quantitative variables

Ethical Approval:

Local Committee for Scientific Research Ethics in Qassim Region , KSA . It was stipulated that the patients assigned to peritoneal dialysis is free to complete participation or withdraw at any time. Withdrawal is respectful and does not cost the participant anything in return. Also it mentioned that strict confidentiality maintained throughout the study period, and private information was not being disclosed in any way. Approval to complete is approved when the patient accepts the link sent.

Results:

Table (1): shows that the study included a total of 52 peritoneal dialysis patients, with a predominant representation of females (46.2%) compared to males (53.8%) , while , (40.4 %) of them were in age group35-50 years old .The vast majority of peritoneal dialysis patients (59.6%) were married , In terms of occupation, employees constituted the largest group (42.3%), followed by (57.7%) not employee . Regarding income, 57.7% of the peritoneal dialysis patients reported having an adequate income, while 42.3 % described their income as inadequate. Regarding the educational level of the participants the majority of participants had attained university education (44.2%), followed by primary school education (25.0%) , (19.2%) from tertiary school education . Finally, (88.5%) of patients identified residence with their family .

Table (2) :revealed that the vast majority of peritoneal dialysis patients (90.4%) were assigned for dialysis daily per week, while 71.2% haven't' family history of kidney failure. Regarding the manner of performs peritoneal dialysis (71.2%) of patients perform dialysis with themselves , followed by (76.9%) have hypertension as other diseases .

Table (3):shows that the majority of peritoneal dialysis patients (76.9%) have awareness of their dialysis importance that their health condition requires it , while 59.6% expressed that his condition needs Kidney and urinary tract specialist followed by (86.5%) known that they didn't do anything before peritoneal dialysis initiation .

Table (4): As regard peritoneal dialysis patient's perceptions of their health condition, (57.7%) not go to their work , while 36.5% expressed that they feel pain when doing any activity or any effort followed by (19.2%) ranged their pain severity from mild to moderate, (34.6%) perceived that they have good health condition while (32.7%) expressed that there have excellent health condition with peritoneal dialysis and (36.5%) expressed that they have better condition compared to last years

Table (5):shown that regarding their adaptation with the extent of the peritoneal dialysis procedure , (66.7%) suffered from abdominal pain , while 26.7% suffrred of fatigue followed by (6.7%) nausea and shortness of breathing , (92.3%) calculate their weight daily .While (94.2%) calculated their fluid intakes daily while, (5.8%) calculated their fluid output daily

Table (6):revealed that All peritoneal patients (100%) have hypercalcaemia with mean 2.14 , while 94.2% have Normal range albumin level (35 to 50 g/L) with mean range 38.77 followed by (65.4%) had normal iron level with mean range 12.15 , on the other hand (94.2%) normal ferritin level with Mean ± SD (580.3 ± 509.5)

Table (7): Shows that there was a highly significant relation between peritoneal patients satisfaction and their quality of life (p=0.001) in the items related to daily life and overall quality

of life scores . While there are a significant relation between patient satisfaction and their quality of life in the items related to daily activities and sleep (p=0.030 , 043) respectively .

Table (8): Shows that peritoneal dialysis patients sociodemographic data with their satisfaction daily activities , adaptation and quality of life there was a highly significant relation between peritoneal dialysis patients sociodemographic data and their quality of life (p=0.001) in the items related to job type . while there are a significant relation were found between daily activities and quality of life (p=0.002, 0.013) in the items related to marital status respectively . On the other hands there was a statistical significant relation in daily activities in the items related to educational levels (p=0.017)

Table (9): Shows that peritoneal dialysis patients sociodemographic data with their level of quality of life there was a highly significant relation between peritoneal dialysis patients sociodemographic data and their quality of life (p=0.001) in the items related to job type and income levels .

Table (1): Distribution of the peritoneal dialysis patients according to their sociodemographic data

Personal data(n = 52)	No.	%
Job		
Worked	22	42.3
Not worked	30	57.7
Gender		
Male	28	53.8
Female	24	46.2
Age		
18-25 years old	6	11.5
25-35 years old	11	21.2
35-50 years old	21	40.4
50-60 years old	12	23.1
More than 60 years old	2	3.8
Marital status		
Single	14	26.9
Married	31	59.6
Divorced	5	9.6

Windowed	2	3.8
Residence		
Urban	42	80.8
Rural	10	19.2
Education level		
Not Read &write	5	9.6
Read &write	1	1.9
Primary	13	25.0
Tertiary	10	19.2
University	23	44.2
Length		
Less than 150 cm	4	7.7
151-175 cm	42	80.8
From 176-200 cm	6	11.5
Weight		
Less than 50 kg	5	9.6
50-75 kg	27	51.9
76-100 kg	19	36.5
More than 100 kg	1	1.9
Residence		
Sons	2	3.8
Family	46	88.5
Single	4	7.7
Income level		
Adequate	30	57.7
Inadequate	22	42.3

Table (2):Distribution of the peritoneal dialysis patients according to their dialysis data (n = 52)

Personal data	No.	%
How long have you been suffering from kidney failure?		
Less than 2 years	16	30.8
2 – 5 Years	23	44.2
More than 5 years	13	25.0
How many times do you assigned for dialysis per week?		
Daily	47	90.4
As ordered by the doctor	5	9.6
Do you have someone in your family who has kidney failure?		
No	37	71.2
Yes	15	28.8
Who explained to you the truth about your illness and treatment?		
Doctor	38	73.1
Nurse	14	26.9
Who performs peritoneal dialysis?		
Nurse in Home	1	1.9
Family member	14	26.9
With my self	37	71.2
Do you have any other diseases?		
Hypertension	40	76.9
Bronchial Asthma	2	3.8
Diabetes mellitus	11	21.2
Hypercholesteremia	3	5.8
Osteoporosis	2	3.8
Heart diseases	2	3.8
Cataract	2	3.8

Table (3):Distribution of the peritoneal dialysis patients according to their awareness regarding peritoneal dialysis (n = 52)

Items	No.	%
Reason for peritoneal dialysis		
There is no place for blood dialysis on my body.	1	1.9
My health condition requires it	40	76.9
Doctor's orders	3	5.8
I don't know	8	15.4
Before peritoneal dialysis, do you review one of the following:		
Nutritionist	0	0.0
Kidney and urinary tract specialist	31	59.6
Dialysis center	5	9.6
Others Mentioned	16	30.8
What do you do before peritoneal dialysis?		
I take medication	4	7.7
I take medication, I do my tests and examinations	3	5.8
I eat appropriate food	0	0.0
I do nothing	45	86.5

Table (4): Distribution of the peritoneal dialysis patient's perceptions of their health condition (n = 52)

Items	No.	%
How many hours do you spend at work per week?		
Less than ten hours	1	1.9
10-20 hours	2	3.8
More than 20 hours	19	36.5
I don’t go to work	30	57.7
Do you feel any pain when doing any activity or any effort?		
No	16	30.8
Often	19	36.5
Yes	17	32.7
If the answer to the previous question is yes, what is your assessment of this pain?		
NA	16	30.8
Very mild	8	15.4

Mild	10	19.2
Moderate	10	19.2
Severe	6	11.5
Very severe	2	3.8
What is your assessment of your health condition now?		
Excellent	17	32.7
Very good	6	11.5
Good	18	34.6
Average	9	17.3
Bad	2	3.8
What is your assessment of your health condition now compared to last year?		
Better	19	36.5
It affects somewhat	2	3.8
It affects moderately	18	34.6
It affects less	2	3.8
It affects sever	11	21.2

Table (5): Distribution of the peritoneal dialysis patients according to their adaptation with the extent of the peritoneal dialysis procedure (n = 52)

Items	No.	%
Symptoms after peritoneal dialysis?		
Fatigue	4	26.7
Shortness of breath	2	13.3
Pain	1	6.7
Headache	1	6.7
Nausea	2	13.3
Abdominal	10	66.7
Body weight and fluid intake and output:		
1- Do you calculate your weight daily?		
No	48	92.3
Yes	4	7.7
2- Do you count the fluids you drink daily?		
No	3	5.8
Yes	49	94.2
3- Do you count the fluids that come out of you daily?		
No	49	94.2
Yes	3	5.8

Table (6): Distribution of the peritoneal dialysis patients according to their Investigation values (n = 52)

Investigations	No.	%
Calcium		
Hypocalcaemia (<1.25)	0	0.0
Normal (1.25 to 1.50)	0	0.0
Hypercalcemia (>1.50)	52	100.0
Min – Max.	1.51 – 3.42	
Mean ± SD.	2.14 ± 0.27	
Median	2.14	

Albumin		
Peritonitis (<35)	3	5.8
Normal range (35 to 50 g/L)	49	94.2
Portal hypertension (>50)	0	0.0
Min – Max.	28.0 – 45.0	
Mean ± SD.	38.48 ± 3.02	
Median	38.77	
Iron		
Iron deficiency anemia (<10.2)	18	34.6
Normal (≥ 10.2)	34	65.4
Min – Max.	3.80 – 26.20	
Mean ± SD.	12.71 ± 5.23	
Median	12.15	
Ferritin		
Folic acid anaemia (<100)	3	5.8
Normal (≥ 100)	49	94.2
Min – Max.	21.0 – 2174.0	
Mean ± SD.	580.3 ± 509.5	
Median	405.1	

Table (7): Correlation between peritoneal patients satisfaction and their quality of life

Quality of daily life	**Satisfaction**	
	r	**p**
Daily life	0.493*	<0.001*
Daily activities	0.301*	0.030*
Sleep	0.282*	0.043*
Overall	0.485*	<0.001*

r: Pearson coefficient

*: Statistically significant at $p \leq 0.05$

Table (8): Relationship between sociodemographic data , Daily activities, Quality of daily life, Adaptation and Satisfaction of peritoneal dialysis patients (n = 52)

Personal data	N	Daily activities	Quality of daily life	Adaptation	Satisfaction
		Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.
Gender					
Male	**28**	68.54 ± 10.99	65.93 ± 13.26	91.67 ± 17.27	84.20 ± 13.50
Female	**24**	64.50 ± 17.85	62.42 ± 14.61	94.44 ± 12.69	82.48 ± 12.76
t (p)		**0.856 (0.402)**	**3.253 (0.004)**	**0.536 (0.593)**	**0.071 (0.944)**
Job					
Worked	**22**	73.16 ± 6.43	71.50 ± 9.27	92.42 ± 17.61	85.69 ± 12.82
Not worked	**30**	61.92 ± 16.95	59.03 ± 14.43	93.33 ± 13.56	81.74 ± 13.20
t (p)		**3.321* (0.002*)**	**3.545* (0.001*)**	**0.210 (0.834)**	**1.079 (0.286)**
Age					
18-25 years old	**6**	73.08 ± 16.27	68.17 ± 12.91	100.00 ± 0.00	87.79 ± 6.23
25-35 years old	**11**	68.88 ± 11.50	64.36 ± 10.46	93.94 ± 13.48	79.04 ± 10.82
35-50 years old	**21**	69.41 ± 8.53	67.33 ± 12.43	88.89 ± 19.25	81.66 ± 16.36
50-60 years old	**12**	57.53 ± 21.70	57.33 ± 18.90	97.22 ± 9.62	87.12 ± 10.42
More than 60 years old	**2**	61.54 ± 2.72	62.50 ± 0.71	83.33 ± 23.57	90.34 ± 12.05

F (p)		**1.913 (0.124)**	**1.145 (0.347)**	**1.153 (0.344)**	**0.949 (0.444)**
Marital status					
Single	**14**	70.47 ± 13.88	65.21 ± 11.50	97.62 ± 8.91	83.43 ± 10.99
Married	**31**	67.62 ± 10.59	67.03 ± 11.77	93.55 ± 15.91	85.03 ± 12.74
Divorced	**5**	62.31 ± 12.80	56.60 ± 13.45	80.00 ± 18.26	77.79 ± 20.94
Windowed	**2**	36.54 ± 46.23	35.00 ± 31.11	83.33 ± 23.57	72.16 ± 4.02
F (p)		**3.953* (0.013*)**	**4.774* (0.005*)**	**2.038 (0.121)**	**0.959 (0.420)**
Residence					
Urban	**42**	65.80 ± 15.22	63.36 ± 14.53	92.06 ± 16.15	81.75 ± 13.55
Rural	**10**	70.38 ± 11.26	68.30 ± 10.34	96.67 ± 10.54	90.36 ± 8.00
t (p)		**0.894 (0.376)**	**1.013 (0.316)**	**0.856 (0.396)**	**1.922 (0.060)**
Education level					
Not Read & write	**5**	47.31 ± 27.65	52.20 ± 23.25	100.00 ± 0.00	89.55 ± 12.41
Read & write	**1**	61.54	73.00	100.00	84.52
Primary	**13**	67.75 ± 8.75	63.23 ± 8.67	87.18 ± 16.88	83.91 ± 8.28
Tertiary	**10**	73.46 ± 10.98	67.90 ± 11.10	100.00 ± 0.00	89.11 ± 6.70
University	**23**	67.56 ± 12.33	65.61 ± 14.54	91.30 ± 18.03	79.26 ± 16.45
F (p)		**3.347* (0.017*)**	**1.320 (0.276)**	**1.435 (0.237)**	**1.376 (0.256)**
Q10 How long have you been suffering from kidney failure?					

Less than 2 years	**16**	63.82 ± 14.10	62.69 ± 13.27	91.67 ± 14.91	79.67 ± 16.18
2 – 5 Years	**23**	71.99 ± 9.35	69.09 ± 11.23	94.20 ± 16.37	85.70 ± 12.48
More than 5 years	**13**	60.80 ± 19.73	57.85 ± 16.56	92.31 ± 14.62	83.95 ± 9.15
F (p)		**3.144 (0.052)**	**3.123 (0.053)**	**0.141 (0.869)**	**1.018 (0.369)**
Q14 Who performs peritoneal dialysis?					
nurse at home	**1**	59.62	63.00	66.67	81.82
Family member	**14**	57.69 ± 20.84	59.86 ± 19.31	88.10 ± 21.11	82.38 ± 17.58
With my self	**37**	70.27 ± 9.86	66.03 ± 11.28	95.50 ± 11.55	83.84 ± 11.38
F (p)		**4.441* (0.017*)**	**1.009 (0.372)**	**2.914 (0.064)**	**0.069 (0.934)**
Do you have any other diseases from the following:					
No	**12**	67.63 ± 13.91	64.83 ± 14.17	97.22 ± 9.62	87.22 ± 8.77
Yes	**40**	66.39 ± 14.90	64.15 ± 13.96	91.67 ± 16.45	82.26 ± 13.99
t (p)		**0.255 (0.800)**	**0.148 (0.883)**	**1.460 (0.154)**	**1.158 (0.252)**

t: Student t-test **F: F for One way ANOVA test**

p: p value for comparison between the studied categories

*: Statistically significant at $p \leq 0.05$

Table (9): Relationship between patient's peritoneal dialysis sociodemographic data and their level of Quality of daily life (n = 52)

Personal data	Level of Quality of daily life						FET	p
	Low (n = 6)		Moderate (n = 36)		High (n = 10)			
	No.	%	No.	%	No.	%		
Gender								
Male	3	50.0	17	47.2	8	80.0	3.401	0.194
Female	3	50.0	19	52.8	2	20.0		
Job								
Worked	0	0.0	13	36.1	9	90.0	14.154*	<0.001*
Not worked	6	100.0	23	63.9	1	10.0		
Age								
18-25 years old	1	16.7	4	11.1	1	10.0	5.884	0.668
25-35 years old	0	0.0	9	25	2	20		

				.0		.0		
35-50 years old	2	33.3	13	36.1	6	60.0		
50-60 years old	3	50.0	8	22.2	1	10.0		
More than 60 years old	0	0.0	2	5.6	0	0.0		
Marital status								
Single	1	16.7	11	30.6	2	20.0		
Married	2	33.3	21	58.3	8	80.0	7.755	0.178
Divorced	2	33.3	3	8.3	0	0.0		
Windowed	1	16.7	1	2.8	0	0.0		
Residence								
Urban	5	83.3	28	77.8	9	90.0	0.652	0.858
Rural	1	16.7	8	22.2	1	10.0		
Education level								

Not Read & write	1	16.7	4	11.1	0	0.0		
Read & write	0	0.0	1	2.8	0	0.0		
Primary	1	16.7	11	30.6	1	100.0	6.027	0.701
Tertiary	1	16.7	7	19.4	2	200.0		
University	3	50.0	13	36.1	7	700.0		
How long have you been suffering from kidney failure?								
Less than 2 years	2	33.3	12	33.3	2	200.0		
2 – 5 Years	2	33.3	15	41.7	6	600.0	1.677	0.850
More than 5 years	2	33.3	9	25.0	2	200.0		
Who performs peritoneal dialysis?								
Nurse at home	0	0.0	1	2.8	0	0.0	3.399	0.580
Family member	3	50.0	8	22	3	300		

with my self	3	50.0	27	.2 75.0	7	.0 70.0		
Do you have any other diseases from the following:								
No	1	16.7	8	22.2	3	30.0	0.552	0.877
Yes	5	83.3	28	77.8	7	70.0		
Income level								
Adequate	0	0.0	21	58.3	9	90.0	12.395*	0.001*
Inadequate	6	100.0	15	41.7	1	10.0		

χ^2: **Chi square test** **FET: Fisher Exact test**

p: p value for comparison between the studied categories

*: Statistically significant at $p \leq 0.05$

Discussion

Chronic diseases, including chronic kidney disease, impact patients' quality of life (QOL). Hemodialysis (HD) and peritoneal dialysis (PD) are renal replacement methods in these patients. (***Aljenaidi et al.,2023***) . [18].

Peritoneal dialysis (PD) catheter complications ease quality of life and growth risks for hospitalizations, for unplanned transitions to haemodialysis and for death. Patient PD catheter management is crucial for safe, sustained PD. Patient viewpoints on approaches for living with PD and using a PD catheter may notify to reduce PD catheter complications, increase individual patient PD modality persistence, and thus increase global home dialysis prevalence (***Fissell et al .,2023)*** [19].

Regarding socio-demographic characteristics of studied nurses (Table 1), the present study showed that there are more than half of patients were males married, and having an adequate income while below half of them were in age group35-50 years old . In terms of occupation, below half of employees and had attained university education. These findings supported with ***Iyasere et al.,2016*** [20]. ***and Jaelani et al.,2023***[21].

In the direction of course assigned and their family history for peritoneal dialysis patients (**Table 2**), the study revealed that the vast majority of peritoneal dialysis patients were assigned for dialysis daily per week, while nearest tree quarter of them haven't' family history of kidney failure and perform dialysis with themselves. While slightly two third of them have hypertension as other diseases. These finding goes in the same line with ***Girgin & Yavuz ., 2022*** [22]. who nessecitate on that the self-esteem score of peritoneal dialysis group is significantly high from the hemodialysis group. Peritoneal dialysis group average point was 21.0, hemodialysis group average point was 17.5 on Cooper smith Self-Esteem Scale. There was no significant difference in depression, anxiety and social adaptation scale scores.

Regarding perception of peritoneal dialysis patients of their health condition. the current study revealed that two- third of peritoneal dialysis patients have awareness of their dialysis importance that their health condition requires it , the majority of them known that they didn't do anything before peritoneal dialysis initiation . However , more than half of them perceived that they can't go to their work , while more than one quadrant expressed that they feel pain when doing any activity or any effort perceived that they have good health condition, excellent health condition with peritoneal dialysis followed by below one quadrant ranged their pain severity from mild to moderate. Finally , they have better condition compared to last years .these finding goes in the same way with L***ee et al .,2020*** [23]. styles the dietary adaptation experienced by peritoneal dialysis patients was a process of adhering to a improved life, even though it was the double sufferings of peritoneal dialysis process and dietary adaptation and concluded that deliver a deep awareness of the lived practice of the dietary adaptation in peritoneal dialysis patients and should help in the development of personalized diet interventions for patients on peritoneal dialysis.

Regarding investigation values , the current study revealed that All peritoneal patients have hypercalcaemia , followed by the majority of them have Normal range of ferritin and albumin level while more than half of them had normal iron level . these values goes in the same line with the finding of ***Uzdil et al ., 2023*** [24]. who revealed that the participants had problems in

nutritional status, sleep patterns, physical activity, social life, family relations, physical appearance, professional and sexual life, and adaptation to life. Besides, the most financial difficulties the most in their lives after the PD treatment, and all the participants stated that they wanted to receive government financial support and concluded that to establish counseling centers that can provide psychosocial support to patients, establish psychoeducational programs, start necessary procedures to generate financial support within the state, and initiate public awareness.

In Tennessee, ***Fissell et al .,2023*** [19], necessitated on that tasks identified by patients as significant included drain pain, difficulty eating and sleeping, and fear of peritonitis. Coping strategies included repositioning while draining, adjusting eating patterns, and development of PD patient and helper knowledge and confidence, particularly at home after early training. Patients pronounced a trial-and-error iterative process of trying multiple strategies with input from multiple sources, which led to individualized solutions

In Republic of North Macedonia , ***Milenkova et al .,2020*** [16], found in their study that estimated rates of non-compliance varied: medical investigations 63%, phosphorus 33, IDWG 22, therapy 14%, HD treatment 9%. When dietary fluid, medications and treatment regimen were studied, non-compliance rate was 73%, adding adherence to medical investigations rose rate to 87%. In multivariate analysis non-compliance was predicted best in patients of younger age, low social status, lower family support (b=-0.202, p=0.023, b=0.220, p=0.036, b=-0.175, p=0.019, respectively . Thus, efforts should be done to meet patients needs and help those confronting dialysis burden to improve quality of life.

Regarding peritoneal dialysis patient's adaptation . The present study revealed that nearest two-third of patients suffered from abdominal pain, while one quadrant suffered of fatigue , nausea and shortness of breathing . On the other hands the majority of them calculate their weight daily and fluid intakes daily , while minority of them calculated their fluid output daily. These findings goes in the same way with ***Fissell et al .,2023*** [19], who stressed on that Peritoneal dialysis patient success in promoted by generating expectations during training that a solution may need multiple challenges, and by a compensation policy that supports robust nursing support for safe progression through the trial-and-error process, mainly in the first few months for incident patients. Interventions to support patient motivation and optimal coping behaviour may also maintenance an increase in PD modality duration for individual patients, and consequently increase overall PD prevalence

On contrast , ***Schaepe & Bergjan .,2015*** [25], necessitated that educational interventions for peritoneal dialysis endure an under-researched area, despite the potential they have to make this type of therapy more successful. Future research on education and training for people receiving PD and for PD nurses is required. In the interim, educational interventions used for other chronic conditions could provide guidance.

In Taiwan , ***Chen et al .,2022*** [26], found in their study that healthcare professionals could use this theory as reference when providing care for peritoneal dialysis patients to support them in adapting to life with peritoneal dialysis as soon as likely via positive self-regulation, daily life adjustments and the method of adapting to the dialysis . The results could help healthcare professionals to improved understand the process of end-stage renal disease patients' adaptation

to peritoneal dialysis, thereby helping patients' adaptation to dialysis in their daily life, improving their quality of life and educating the quality of medical care.

Regarding satisfaction and quality of life, the current study showed a highly significant relation between peritoneal patients satisfaction and their quality of life in the items related to daily life and overall quality of life scores . While there are a significant relation between patient satisfaction and their quality of life in the items related to daily activities and sleep. These findings goes in the same way with ***Nagasawa et al .,2018*** [14] who found that patients with good sleep QOL (mean or above) had higher odds of medication compliance (odds ratio, 3.36; 95% confidence interval, 1.26–8.96; P = 0.016). Consequently, refining the quality of sleep of dialysis patients might benefit to progress their medication compliance.

As regard relationship between peritoneal dialysis patient's sociodemographic data and their satisfaction , daily activities , adaptation and quality of life , the current study revealed that there was a highly significant relation between peritoneal dialysis patients sociodemographic data and their quality of life in the items related to job type . While there are a significant relation were found between daily activities and quality of life in the items related to marital status and educational levels. These findings goes in the same line with ***Wu et al., 2023*** [26], in China who revealed that there were statistically significant differences in age, dialysis age, education, urea clearance index, history of high blood pressure, and diabetes between the two groups . Patients with cognitive impairments had lower compliance levels in terms of diet, fluid restriction, medication, therapeutic and dialysis regimen

Concerning relationship between peritoneal dialysis patient's sociodemographic data with their level of quality of life , the current study revealed that there was a highly significant relation in the items related to job type and income levels . these findings supported with ***Aljenaidi et al .,2023*** [18] who found that peritoneal dialysis (PD) patients had better QOL scores in all domains than patients starting Heamodialysis (HD) . Similarly, patients on PD conserved more active social support and ultimately handled better emotional and physical well-being than those undergoing HD.

In Saudi Arabia **, *Almousa et al.,2021*** [13] recommended usefulness of the health services and medical education institutes, which might donate in the intervention of educational programs directed to increase awareness of healthcare providers and the community problem using different media and scientific journals.

In China , ***Wu et al., 2023*** [26] revealed that patients with cognitive impairments also had lower quality of life scores in the dimensions of physical function, general health, social function, emotional function, and mental well-being . Cognitive impairment seems to be mutual between CAPD patients and may adversely affect both their treatment adherence and overall quality of life. A more comprehensive understanding of the underlying mechanisms imposes future study.

Conclusions

The current study concluded that there was a highly significant relation between patient's sociodemographic data and their quality of life in the items related to job type. While there are a

significant relation were found between daily activities and quality of life in the items related to marital status, educational levels , job type and income levels .

Recommendations

Based on the results of the current study, it is recommended that:

1. More researches to evaluate the effect of intervention program for more evidence that would be helpful for enhance patients 'adaptation and quality of life for peritoneal dialysis patients.

2. Strengthening for implementing instructional scheme regarding peritoneal dialysis and its management in order to increase satisfaction and quality of life among those patients.

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