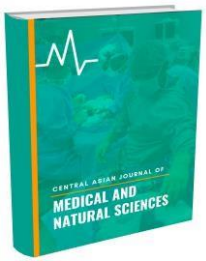

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Article

The Differences in Quality of Life according to Demographic Characteristics in Patients Undergoing Hemodialysis

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Abstract: A descriptive quantitative study was carried out in order to assess impact of viral hepatitis infections on health-related quality of life in patients undergoing hemodialysis for two groups of samples (positive and negative) viral hepatitis. The study was initiated from the period of October 2023-Aguest 2024 patients answered a specific study questionnaire. Data were collected and statistically analyzed. The study was conducted on patients attending dialysis centers in the holy city of Karbala. Participants were selected a questionnaire was created a probability randomly by the researcher based on previous studies in addition to the researcher's experiences. The questionnaire included two parts, the first was about the social and demographic characteristics of the patients and the second part was about the quality of life provided by the World Health Organization. SPSS version 26 was used for analysis and interpretation data. Quality of life according to demographic characteristics in patients undergoing hemodialysis indicated that there was no significant relationship among with viral hepatitis regard to marital status, educational levels, occupation, duration of dialysis treatment/year their except age, economic status was significant Chi-square Value (11.50) d.f. (4) p-value (0.021), Chi-square Value (6.61) d.f. (2) p-value (0.037). There was no significant relationship among with viral hepatitis regard to place of residency, duration of dialysis in hour per day, number of weekly hemodialysis sessions, diabetes mellitus, hypertension, heart diseases, their except sex was significant p-value = .008. The study concluded that hemodialysis had varying degrees of impact on quality of life all dimensions. And recommended creating a broad health education program to increase patients' understanding and awareness of the prevention of viral hepatitis and how it is transmitted and to increase preventive measures.

Keywords: Health-related quality of life, End-stage renal disease, viral hepatitis, Hemodialysis

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1. Introduction

End-stage renal disease, along with comorbidities and the need for dialysis, profoundly affects daily life, leading to a higher risk of psychological problems, restricted economic productivity, and decreased quality of life for patients. Multiple studies have found an association between decreased quality of life and increased mortality in individuals undergoing dialysis [1].

Approximately 10% of the population suffers from chronic kidney disease, which leads to a large number of premature deaths. In recent decades, it has become the third most common cause of death worldwide. However, by 2040, it is expected to become the fifth leading cause of premature death in terms of years of life lost [2].

Treatment for end-stage renal disease (ESRD) involves restoring kidney function that has been compromised by dietary restrictions, pharmaceutical interventions, and dialysis. Kidney function tests include a group of tests and treatments performed to evaluate the efficiency of the kidneys. Dialysis patients must regularly undergo diagnostic tests to evaluate cardiovascular problems [3].

Dialysis is generally used to treat kidney failure, including acute and chronic conditions, when conventional medical treatment proves ineffective. In developing countries, the prevalence of dialysis treatment is increasing significantly as it becomes accessible to a larger population [4].

Regular dialysis sessions may lead to social isolation, reduced self-reliance, and increased dependence on others for daily activities. A large number of individuals experience an inability to maintain employment, which may lead to social isolation [5].

Chronic diseases often lead to a significant decline in energy, strength, time, financial resources, and interpersonal relationships. Chronic kidney disease is associated with decreased physical function and social contacts, limitations in work and nutrition, and decreased independence [6].

Extending dialysis treatment can reduce independence, dependency on family members, and disrupt social and marital ties. In addition, it can lead to decreased financial resources. These factors have a significant impact on the physical, psychological, economic and environmental aspects of life, ultimately leading to a decreased quality of life [7].

Chronic kidney disease hampers physical well-being and restricts involvement in social and vocational activities. This disorder significantly impairs regular functioning and necessitates recurrent hospitalization. Embracing the condition reduces the time needed for adaptation and psychological distress, and enhances the quality of life for sufferers. Studies indicate that individuals undergoing dialysis exhibit a worse impression of their overall quality of life compared to individuals who are in good health [8].

Health-related quality of life (HRQoL) includes all aspects of an individual's well-being, including physical, mental, emotional and social functioning [9].

The term health-related quality of life (HRQoL), coined in the 1970s, refers to the impact of illness on various aspects of a person's life, including their psychological, physical, and social health. It also takes into account coping strategies based on previous health experiences. HRQoL assesses functional abilities and emotional, cognitive, social, and sexual functioning, as well as an individual's perception of his or her health and illness. It is considered the most reliable measure of the disease and the effects of treatment on the patient's life [10].

2. Materials and Methods

Study design

Descriptive quantitative study was conducted to evaluate impact of viral hepatitis infections on health-related quality of life in patients undergoing hemodialysis for two groups of samples (positive and negative) viral hepatitis. The study was initiated from the period of October 2023-Aguest 2024.

Sample and sampling

A probability randomize sampling/100 patients will be participating in this study, the participants will be assigned into two groups: 1) Viral Hepatitis Infections, 2) Non-Viral Hepatitis Infections Setting of the Study :

This research was conducted in Imam Hussein Medical City Center: Habib bin Mazaher for the negative group.

The Study Instrument

To complete the aim of study, a form was designed and formulated after a comprehensive evaluation of previous research and literature. The questionnaire is divided into two parts;

Part One: Details about patients demographics, including age, gender, marital status, place of residence and degree of education, occupation, economic status, duration of dialysis treatment, duration of dialysis per hour per day, duration of dialysis per week, pre-existing chronic diseases.

Part Two: The WHOQOL-BREF was the final section of the To evaluate health of quality of life. Answers varied since "not always" toward "to a great extent".

In order to measure the quality of life of people with end-stage kidney disease (ESKD), the WHOQOL group created a health-related questionnaire called the WHOQOL-BREF. Physical health, mental health, social interactions, and environmental factors are the four aspects of quality of life that the 26-item examination examines. patient has the option of completing the questionnaire independently or having it conducted by an interviewer.

Statistical Data Analysis

Data Analysis

The data were analyzed and interpreted through use of the application of Statistical Package for Social Sciences (SPSS), version 26.

3. Results

Table 1. Statistical Difference in Overall Assessment of Health-Related Quality of Life according to Some Demographic Characteristics Using the Mann-Whitney U Test

Demographic Characteristics	Rating	N	Mean Rank	Sum of Ranks	Mann-Whitney U	p-value
Sex	Male	29	30.16	874.50	169.5	.008
	Female	21	19.07	400.50		S
	Total	50				
Place of Residency	Urban	31	26.56	823.50	261.5	.509
	Rural	19	23.76	451.50		NS
	Total	50				
Duration of Dialysis in hour per day	3	10	22.40	224.00	169	0.45
	4	40	26.28	1051.00		NS
	Total	50				
	Two Times/ Week	8	19.88	159.00	123	0.23 NS

Number of Weekly Hemodialysis Sessions	Three Times/ Week	42	26.57	1116.00		
	Total	50				
Diabetes Mellitus	Yes	13	23.54	306.00	215	0.57
	No	37	26.19	969.00		NS
	Total	50				
Hypertension	Yes	47	24.97	1173.50	45.5	0.306
	No	3	33.83	101.50		NS
	Total	100				
Heart Diseases	Yes	17	24.44	415.50	262.5	0.71
	No	33	26.05	859.50		NS
	Total	100				

P= Probability, Sig= Significance, N.S= Not significant, S= Significant

Table 1 Difference in Overall Assessment of Health-Related Quality of Life according to Some Demographic Characteristics Using the Mann-Whitney u test this table indicated that there was no significant relationship among with viral hepatitis regard to place of residency, duration of dialysis in hour per day, number of weekly hemodialysis sessions, diabetes mellitus, hypertension, heart diseases, their except sex was significant p-value = .008.

Table 2. Statistical Difference in Overall Assessment of Health-Related Quality of Life according to Some Demographic Characteristics Using the Kruskal-Wallis Test

Demographic Characteristics	**Rating and Intervals**	**N**	**Mean Rank**	**Sig.**
Age / years	20-29	3	36.83	Chi-square Value (11.50)
	30 - 39	8	21.44	d.f. (4)
	40 - 49	11	21.55	p-value (0.021)
	50 - 59	14	34.75	S
	60+	14	19.25	
	Total	50		
Marital Status	single	5	31.20	Chi-square Value (6.08)
	married	36	27.33	d.f. (3)

	widowed	4	13.75	p-value (0.108) NS
	divorced/separated	5	16.00	
	Total	50		
Educational Levels	No Reads and no writes	1	9.00	Chi-square Value (4.99)
	Reads and writes	5	19.20	d.f. (5)
	Primary school	25	24.64	p-value (0.41) NS
	Middle school	11	25.82	
	Secondary school	4	35.38	
	University	4	32.13	
	Total	50		
Occupation	not work	1	37.00	Chi-square Value (7.68)
	Employee	5	27.70	d.f. (4)
	Gainer	15	23.97	p-value (0.053) NS
	Housewife	20	16.30	
	Retired	9	25.82	
	Total	50		
Economic Status	Sufficient	16	32.09	Chi-square Value (6.61)
	Medium	24	20.25	d.f. (2)
	Insufficient	10	27.55	p-value (0.037) S
	Total	50		
Duration of dialysis treatment / years	1-2 year	9	34.28	Chi-square Value (5.19)
	2-5 year	16	20.47	d.f. (2)
	More than 5 years	25	25.56	p-value (0.075) NS
	Total	50		

Table 2 Statistical Difference in Overall Assessment of Health-Related Quality of Life according to Some Demographic Characteristics Using the Kruskal-Wallis Test, this table indicated that there was no significant relationship among with viral hepatitis regard to marital status, educational levels, occupation, duration of dialysis treatment/year their except age , economic status was significant Chi-square Value (11.50) d.f. (4) p-value (0.021), Chi-square Value (6.61) d.f. (2) p-value (0.037).

4. Discussion

The effectiveness of medical care can be measured by quality of life. hemodialysis patients face many obstacles that may negatively affect their health.

The majority of patients (30.0%) were in the age group of 60 years. It was found that 28.0% of participants enrolled in the study groups were negative for hepatitis C virus (HCV) in the age group of 50-59 years, older adults had a higher prevalence of chronic health conditions, resulting in increased levels of pain and suffering, ultimately resulting in a worse quality of life compared to younger age groups.

Regarding sex, Table 1 indicates that there are significantly 50.0% from the participants in negative groups are females and male respectively. The absence of disparities between males and females can be attributed to shared exposure to common risk factors, including blood transfusion, dialysis system, and treatment length. The process of hemodialysis resulted in their simultaneous development.

Alhajim, S. A. (2017) When it comes to quality of life, all three areas – physical health, psychosocial interactions, and the environment – are hit hard. Older age, worse socioeconomic status, central line vascular access, diabetes, positive hepatitis, and longer duration of dialysis are all factors associated with poorer quality of life [11].

Elhadad et al (2020) Study found that ESRD patients with depression had lower ratings on all aspects of quality of life than those without depression. Quality of life has been shown to be significantly associated with clinical quality of diabetes or hypertension in patients with ESRD ($P < 0.05$). It has been discovered that people with clinical disease have a lower quality of life than people without it [12].

The results were similar to those of the gender-influenced study conducted by Ezzat et al. (2015), who noted that, with the exception of the physical functioning subscale, the majority of HD patients who tested positive for HCV antibodies had worse scores than those who tested negative. Gender was the only factor influencing quality of life (QOL) in this sample; Men reported more positive feelings about their roles, physical pain, and postpartum syndrome (PCS) than females [13].

In Table 2 indicated that there was no significant relationship among with viral hepatitis regard to marital status, educational levels, occupation, duration of dialysis treatment/year their except age, economic status was significant Chi-square Value (11.50) d.f. (4) p-value (0.021), Chi-square Value (6.61) d.f. (2) p-value (0.037).

Agree with the study Khasal et al (2020) that the Psychosocial domain has the effect due to hemodialysis with chronic viral hepatitis, indicated a negative correlation between sociodemographic and psychosocial outcomes, with the exception of income and socioeconomic status in the area of social relations/support [15].

Ezzat et al (2015) found the infection with hepatitis C virus reduced quality of life patients in dialysis various mental aspects, specifically in the subscales of the components of mental health, social functioning, emotional well-being, physical vitality, and mental health. A better quality of life is linked to being a man, being younger, and having a job [13].

Agree with Pardeep, Mittal et al. (2015) Hepatitis patients had a significantly lower quality of life compared to the control group. When compared to female patients, males with hepatitis C tend to be healthier and more physically productive. I disagree with the study findings that men also have superior social connections compared to women. There was no statistically significant difference between genders in the SF-36 when it came to role limitations caused by physical health, mental health, social functioning, pain, and general health; however, women reported higher scores [16].

Not consistent with study Floria et al (2022) age was negatively associated with total and most quality of life measures ($P < 0.01$) [17].

5. Conclusion

The majority of the study sample age was 60+. The study sample was equally male and female in the study. There is a significant relationship between patient and their socio-demographic characteristics such as (age, sex, and economic status) p-value (0.021), p-value (0.037).

6. Recommendations

Hemodialysis patients are considered a vulnerable group that needs specialized medical and psychosocial support. Individualized treatment should be provided based on the unique needs of each patient. Educational and financial, as well as gender and age, all influence the requirements of individuals. Dialysis patients need social, economic, educational, and nutritional support to maintain a healthy weight and improve quality of life.

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8. Financial Disclosure

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9. Conflict of Interest

There isn't any disclosed conflict of interest by the authors.

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