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Original Article

HEALTH-RELATED QUALITY OF LIFE AMONG PATIENTS RECEIVING HEMODIALYSIS AT A SELECTED HOSPITAL

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Abstract:

Background: *Last stage of renal disease patients get hemodialysis as treatment. These patients may suffer lots of physiological and psychological side effects which may affect their life. Objectives: The aim of the study was carried out to assess the quality of life in chronic kidney disease (CKD) patients who received hemodialysis.*

Methods: *The present study was a cross sectional analytic study and conducted among 102 hemodialysis patients from Kurmitola General Hospital from October 2023 to September 2024, Dhaka. This study was using two questionnaires first one was socio-demographic questionnaire and other was the Health-Related Quality of Life scale (HRQOL-BRRIF). The data were collected and recorded in structured questionnaire by the researcher herself. For statistical analyses t test and Pearson Product-Moment Correlation test were performed as applicable using SPSS for windows version 23.*

Results: *In this study, 102 hemodialysis patients their mean age were 54.00±9.833 years. Among them 68 (66.7%) were men and 74 (33.3%) were women. Among the patients, 40 (39.2%) reported having a good quality of life, while 62 (60.8%) had a bad quality of life.. This study revealed that, age (p=.000) and marital status (p=.008) were found to be significant association with the quality of life among participants. This study found that the quality of life of dialysis patients is highly correlated with a number of demographic characteristics.*

Conclusion: *This study revealed that most of the hemodialysis patients had low quality of life. Present study highlights several factors that healthcare policymakers and clinicians should consider to improve the quality of life of patients receiving hemodialysis.*

Keywords:
Quality of life, Hemodialysis, Chronic kidney disease CKD.

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Introduction:

Health-related quality of life (HRQoL) is a complex perspective that is used to find out a person's present health status. An individual's physical, mental, and social well-being are all taken into consideration, making HRQoL which is a useful indicator of general health[1,2]. The HRQoL is reduced in chronic kidney disease patients than in normal people. Chronic kidney disease is a very common disease worldwide and causes problems in public health[3,4]. In late stage CKD who receive dialysis has a lower health-related quality of life[5]. Patients undergoing dialysis may have a variety of physical and mental adverse effects from the condition and related therapies, which could change their way of life and reduce their HRQoL[5].

Chronic kidney disease (CKD) affects 10–15% of people worldwide[6]. During the last three decades, the incidence of kidney illness has increased by 88% (from 11 to 21 million), the prevalence by 87% (from 147 to 275 million), the death rate by 98% (from 0.6 to 1.2

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million), and the disability adjusted life years by 62%[7]. The majority of patients, including 86.8% in 2010 and 90.6% in 2018, selected hemodialysis as their first dialysis option. One of the biggest challenges in Asian countries is estimating the precise incidence and prevalence of dialysis populations. Dialysis patients have become between 0.1 and 0.2% of the population in affluent Asian nations including Taiwan, Korea, and Japan[8]. An estimated 35,000 to 40,000 individuals in Bangladesh suffer from end-stage kidney disease (ESKD) annually. However, most end-stage renal failure (ESKF) patients lack access to renal replacement treatment (RRT) but the current hemodialysis (HD) facilities can only handle 9000–10,000 new patients per year. Between 2010 and 2018, the prevalence of dialysis rises significantly, but the age-standardized prevalence of dialysis was constant[9].

Older age, lower socioeconomic status, and malnutrition are clinical and demographic traits associated with a lower HRQoL in hemodialysis patients. Observational studies have shown that certain sociodemographic characteristics, including female sex, advanced age, lower employment, and marital status, are associated with reduced HRQoL in patients with end-stage kidney disease. The HRQoL of patients with end-stage kidney disease is significantly influenced by the duration of their hemodialysis sessions. Anemia and severe malnutrition are two biological variables that are linked to a decreased HRQoL. Anxiety and depression are psychological conditions that have been associated with lower HRQoL[10].

Hemodialysis individuals with chronic renal disorders may experience significant psychological effects[11]. End-stage renal disease affects patients' life profoundly and is a terrible, irreversible ailment. It has detrimental impacts on the patients' economical, psychological, and physical well-being, among other areas of their existence. HRQoL is still a major issue for hemodialysis patients, despite great advancements in the treatment of end-stage kidney disease (ESKD) patients. Medical and nonmedical expenses paid by the patient during the course of the illness have a significant negative economic impact on HRQoL in poor nations such as Bangladesh. The cost of medication, laboratory testing, and hospital stays are the primary components of medical expenses. In contrast, nonmedical costs include the price of travel, lodging, and other out-of-pocket expenditures during the treatment[12].

Methods and Materials

Hemodialysis patients' health-related quality of life was evaluated using a cross-sectional study methodology from October 2023 to September 2024 conducted in Kurmitola General Hospital (KGH), Dhaka.

The study population consisted of 102 hemodialysis patients aged over 30 who were receiving treatment at both indoor and outdoor department at the Kurmitola General Hospital, Dhaka for at least six months due to chronic renal disease.

After selection of the subjects, the nature, purpose and benefit of the study were explained to each subject in details. They were encouraged for voluntary participation. The instruments of this study had two parts. Part I: Socio-demographic characteristics questionnaire: The socio-demographic characteristics questionnaire included the details of patients' related information such as: age, sex, religion, education, occupation, number of children, monthly family income, and type of residence. Part II: Quality of life related questionnaire: The World Health Organization (WHO) developed a quality-of-life instrument, the WHOQOL in 1996, which is a self-reporting tool that designed many subjective aspects of quality of life. The World Health Organization Quality of Life Brief Version (WHOQOL-BREF) is a questionnaire that measure a person's quality of life. It was developed by World Health Organization (WHO) on 1998 and WHO has given a free access permission to use the instrument. It helps to measure physical health, psychological health, social relationship, environmental health[13]. Each item is scored on a scale of 1 to 5, mean score for each domain is calculated, the mean domain is multiplied by 4 to create a scaled score. Total 26 questions are present & higher score indicates a higher quality of life. Total score was ranging from 26 to 130. A value of 60 is considered as an optimal cut off point for assessing low versus high quality of life and satisfaction with health (World Health Organization, 1998). Total score was made by computing score of all individual items. Then the total score was categorized as low and high quality of life. After completion of data collection, data was checked and verify to identify missing data and minimize the error. Data was analyzed in computer by using Statistical Package for the Social Sciences (SPSS) version 23. Descriptive statistics such as frequency,

percentage, mean, and standard deviation was used to describe the sociodemographic characteristics of hemodialysis patients. Inferential statistics such as t-test and Pearson Product-Moment Correlation were used to examine the relationship between demographics characteristics and health related quality of life among hemodialysis patients.

Results

The findings of the study including describes the socio demographic characteristics of patients receiving hemodialysis; describes the level of health related quality of life among patients receiving hemodialysis and finally explains the relationship between the socio demographic characteristics of patients receiving hemodialysis and their health related quality of life.

Part A: Distribution of socio-demographic characteristics of patients receiving hemodialysis.

Figure 1 showed the socio-demographic characteristics of the study participants. A total of 102 patients receiving hemodialysis were enrolled in this study. Their mean age was 54.00±9.83 years with range from 34 to 79 years. More than half (56.9%) of them are in the 50-65 years' age group.

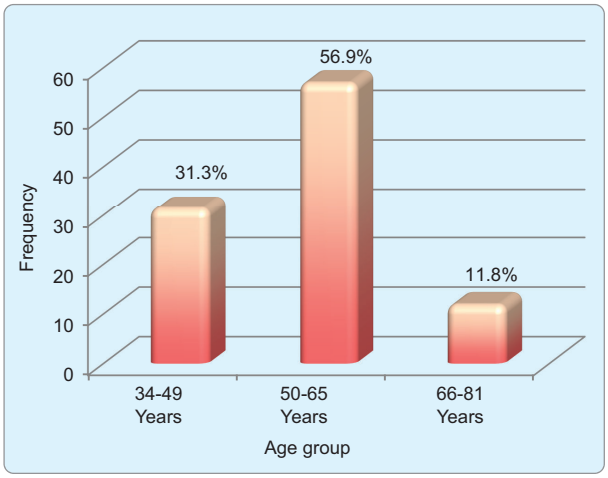

Figure1: *Distribution of respondents by age group (n=102)*

Table-I

Distribution of respondents by gender (n=102)

Variables	Categories	Frequency	Percentage (%)
Gender	Male	68	66.7
	Female	34	33.3

Table I shows that out of 102 participants' majority 66.7% of them were male and rest of the participants 33.3% were female.

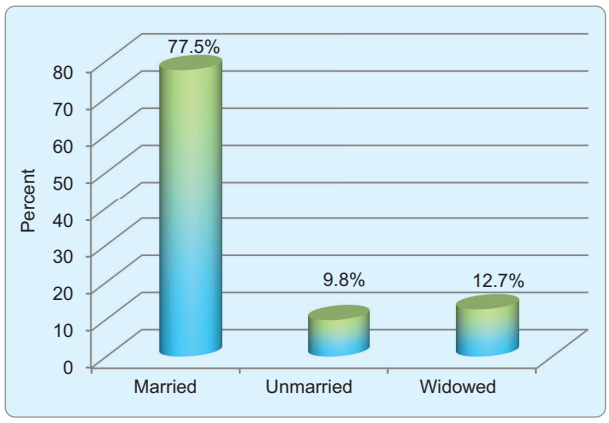

Figure 2. *Distribution of respondents by Marital status (n=102)*

Figure 2 shows that out of 102 participants most 77.5% of them were married, 12.6% were widowed and only 9.8% were unmarried.

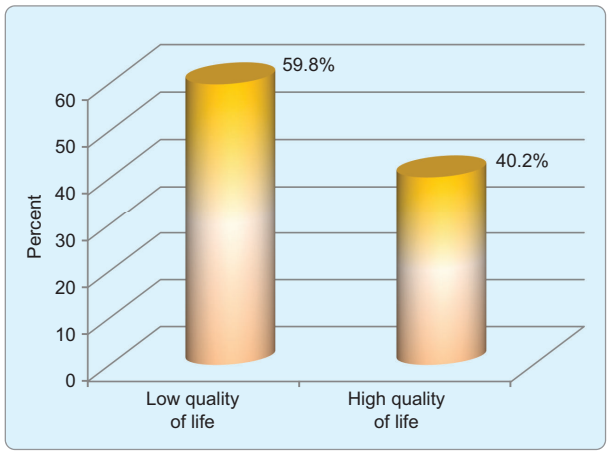

Figure 3: *The level of health related quality of life among patients receiving hemodialysis (n=102)*

Figure 3 Showed a total of 102 patients receiving hemodialysis were enrolled in this study. The majority (60.8%) of participants have low quality of life and rest of the participants 39.2% have high quality of life.

The table II stated the relationship between the socio demographic characteristics of patients receiving hemodialysis and their health related quality of life.

Findings revealed that, age (r=-.785, p=0.000) were found to be significant association with the quality of life among participants but gender (t=-.1.683, p=0.079)

Table-II

Relationship between the socio demographic characteristics of patients receiving hemodialysis and health related Quality of life (n=102)

Variables	Categories	r	*P* Value
Age (Years)		-.785	0.000
Gender			-1.683
	Male	61.18±19.594	
	Female	68.94±23.051	
Marital status		5.115	0.008
Married	63.63±20.701		
Unmarried	79.90±16.093		
Widowed	52.77±19.762		

N.B. M=Mean, SD=Standard Deviation, r = Pearson product moment correlation coefficient test, t= Independent sample t test, p =0.05 significant value.

was not associated with the quality of life. Again, findings revealed that, marital status (F=5.115, p=0.008) were found to be significant association with the quality of life among participants.

Discussion:

Hemodialysis patients' quality of life is negatively impacted in comparison to the general population and other medical illnesses. A person's incapacity to perform everyday tasks, inability to focus entirely on them, financial difficulties, lack of support from friends and family, and other health issues all contribute to a decline in their quality of life. Assessing the health-related quality of life of hemodialysis patients at a particular Bangladeshi hospital is the goal of this study.

The sociodemographic attributes of hemodialysis patients. This study involved the enrolment of 102 hemodialysis patients in total. Their average age was 54.00±9.833 years, which is consistent with a few earlier investigations that were carried out in Malaysia and Jordan[14,15]. This result, however, contradicts a prior study carried out in Ethiopia that found the mean age to be 36.8±11.9 years[16]. The majority of participants in this study were men, which is consistent with the results of a few other investigations carried out in Saudi Arabia and Africa[17].

In contrast to the current study findings obtained in Malaysia and Jordan, a few investigations revealed that the majority of participants were female[14,15]. As with earlier studies conducted in Jordan, Malaysia, and Uganda, the majority of participants in this study were married[14,15,19].

In this current study most of participants were married which is congruent with previous several studies in Jordan, Malaysia and Uganda [12].

The extent of health-related The quality of life of hemodialysis patients According to the current study, the majority of participants (60.8%) had a bad quality of life, which is consistent with the results of earlier research conducted in Palestine, Pakistan, Iran, and Jordan[20, 21, 22]. This result, however, differs from the Indonesian study that found that just 32.3% of participants had a negative quality of life[23].

Compared to earlier research conducted in other nations, the low quality of life experienced by hemodialysis patients differs depending on the setting and the scale used to measure quality of life in each nation. Relationship between hemodialysis patients' sociodemographic traits and their quality of life in relation to their health[23].

Age is a major factor that influences the quality of life among patients receiving hemodialysis. In this current study, there was a significant negative correlation between age and low quality of life among hemodialysis patients. From this study, it was evident that the youngest group of patients receiving hemodialysis had a high quality of life compared to the older group. Due to age-related limitations, they are unable to perform household tasks, and even older patients are unable to access proper care from their ailing relatives and health care system which might be influenced by low quality of life. This finding is similar to a previous study conducted in Jordan and Malaysia[14,15]. However, this finding is inconsistent

with one previous study conducted in Ethiopia, which reported that there was no significant relationship between patients' age and quality of life[16].

Conclusion:

This study demonstrated that poor quality of life was significantly more common among hemodialysis patients. Furthermore, certain traits that were proven to be substantially linked to a poor quality of life for hemodialysis patients are identified in the current study. Healthcare officials and physicians should consider these factors to develop timely and effective solutions that will manage chronic renal disease and improve the quality of life for patients receiving hemodialysis.

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