**AN ASSESSMENT OF QUALITY OF LIFE IN ESRD PATIENTS UNDERGOING HEMODIALYSIS**

**ABSTRACT**

**Background & aim**

Assessment of health-related quality of life in ESRD patients. The quality of life of the patients may be greatly reduced because it necessitates lifelong treatment in the form of renal replacement therapy or hemodialysis. Therefore, the main goal of the study is to evaluate the QOL (quality of life) of patients receiving hemodialysis using WHO-QOL criteria.

**Methods**

At the Dr. B.R. AMCH dialysis unit, a cross-sectional descriptive study involving (n=134) patients (of whom n= 34 gave negative consent) was carried out over the course of three years, from September 10, 2018, to September 10, 2021.

**Results**

A total of 134 CKD patients participated in the study (34 gave negative consent), which included 60 males and 39 females and 1 preferred not to say, visiting DR. B.R. AMCH, being treated on OUT patient basis. The quality of life was assessed based on WHOQOL questionnaire, assuming each measurement had same Weightage. The study conducted showed the rate of quality of life the poor and very poor (51%), with neither good nor bad as 22% and only 25% as good.

**Conclusion**

WHO QOL is a trustworthy tool for assessing QOL in ESRD patients. The research indicates that the progression of the illness has a negative impact on both mental and physical health, as well as causing financial strain and strained relationships with others.

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**Introduction**

Globally, the number of patients suffering from chronic renal failure (CRF) is continuously rising 1. This condition is linked to a low quality of life (QOL) and a significant financial burden. These days, treating CRF is among the most costly illnesses to treat 1,2,3. With their scarce resources, developing nations are especially affected by this (1) End-stage renal disease (ESRD) is the term for the fifth stage of chronic kidney disease (CRF) that has a GFR of less than 15 mL/min, as determined by the National Kidney Foundation 2,4 According to the WHO, QOL is "an individual's perception of their position in life, in relation to their goals, expectations, standards, and concerns, as well as the culture and value systems in which they live." It is a broad concept that is intricately influenced by an individual's physical and mental well-being, beliefs, social interactions, and relationship to prominent environmental features.3,5 As a result, measuring one's health-related quality of life is a necessary step towards improving treatment outcomes, comparing different treatment options and assessing the efficacy and quality of patient care. (4) Kara et al. opined that a higher quality of life is substantially correlated with social support from friends, family, coworkers and the community. 5,6

**Aims and objectives:**

 To assess quality of life in ESRD patients undergoing hemodialysis using WHOQOL-BREF questionnaire.

**MATERIALS AND METHODS**:

**Study design**

This cross-sectional descriptive study involved 134 patients, 34 of whom declined to participate over a period of three years, from September 10, 2018, to September 10, 2021, at the Dr. B. R. Ambedkar Medical College and Hospital's dialysis center in Bengaluru. Every subject's information was gathered, and it was all recorded in a data collection form. The WHOQOL-BREF questionnaire, which has been validated and is frequently used as a quality of life measure, was employed in our investigation.

**Subjects**

The study included patients who were 18 years of age or older, had completed at least three months of maintenance hemodialysis, could read and write in Hindi, English, or the local language, and could give informed written consent. In order to prevent bias in the assessment of QOL, patients who had voluntarily stopped receiving dialysis, those who had undergone any major surgical procedures within the previous three months, malignancies, uremic encephalopathy, tumors, cognitive impairment, dementia, active psychosis, and significant hearing impairment were excluded from the study.

**Instrument for evaluating quality of life**

Based on four dimensions of quality of life—physical, psychological, social relationships, and environment—the WHOQOL-BREF is a subjective health-related questionnaire designed by the World Health Organization to evaluate the health-related quality of life in patients with end-stage renal disease (ESRD). The questionnaire is accessible in 19 languages, including the native Kannada.

**RESULT**

Sociodemographic characteristics of the study population are shown in Table 1. A total of 134 CKD patients participated in the study (34 gave negative consent), which included 60 males and 39 females and 1 preferred not to say, visiting DR. B.R. AMCH, being treated on OUT patient basis. The quality of life was assessed based on WHOQOL questionnaire, assuming each measurement had same Weightage. The study conducted showed the rate of quality of life the poor and very poor (51%), with neither good nor bad as 22% and only 25% as good.

Fig 1: Quality of life assessed based on WHO QOL (How would you rate your quality of life )

A total 57% of respondents expressed complete dissatisfaction with their health, 28% indicated they were neither satisfied nor dissatisfied, and 16% indicated they were satisfied with their health. One of the main issues ESRD patients deal with is physical pain. According to the study, 68% of patients reported having moderate to severe pain, and roughly 22% reported mild pain. The following results were found when medical treatment was necessary for daily functioning: approximately 30% of subjects needed the bare minimum of medical therapy, while 69% needed moderate to severe amounts. A fraction over 18% of the subjects said they had no fun at all, 67% of patients said they had fun to some extent, and 15% of subjects said they were happy with their lives as they were. The study found that only 10% of participants had good concentration, 21% had complete difficulty concentrating, and 68% had little to moderate difficulty concentrating. The study found that 21% of participants who had end-stage renal disease (ESRD) felt safe despite their condition, 37% felt somewhat safe, and 42% of participants who had ESRD did not feel safe at all. Having enough money for daily expenses was one of the biggest problems ESRD patients faced; after paying for their medical care, 75% of the patients had very little to moderate money left over, and only 25% had enough for daily needs. Most of the subjects (80%) had very little to no energy left at the end of the day, and 74% found it very difficult to accept the way their bodies looked Table & graph (1).

Table 1: Significance of QOL attributes

| Attributes | Not at all | A little | Moderately | Mostly | Completely |
| --- | --- | --- | --- | --- | --- |
| Dependence on medical treatment | 5 | 26 | 28 | 26 | 15 |
| Money requirement for daily needs | 14 | 27 | 34 | 20 | 5 |
| Energy for daily activities | 20 | 28 | 32 | 18 | 3 |
| Physical pain aﬀecting the daily activities | 8 | 14 | 43 | 23 | 12 |
| Enjoys life | 18 | 29 | 38 | 13 | 2 |
| **P-value** | Chi-square 25.63,p<0.001 | | | | |

Table 2:- Significance of personal relation of QOL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attributes | Very dissatisfied | Dissatisfied | Neither satisfied nor dissatisfied | Satisfied | Very satisfied |
| Personal relationship | 13 | 23 | 33 | 23 | 8 |
| Sleep | 16 | 27 | 37 | 16 | 4 |
| Chi-square ,value | 8.14,p<0.001 | | | | |

Proper functioning needs ESRD patients require 7-8 hours of sleep per day, which they are unable to meet; about 80% of participants reported having trouble falling or staying asleep. A significant portion of them 76% expressed dissatisfaction with their daily work output, and they found it extremely difficult to accomplish daily tasks and go about their daily lives. Only 31% of the patients were satisfied with their personal relationships, and 69% of them were very unhappy with their personal lives and relationships. The patients had difficulty forming interpersonal relationships Table (2)

Table 3: Comparison of QOL

|  |  |  |
| --- | --- | --- |
| Variable | QOL | P-Value |
| **Sex** | | |
| Male | 75.19±7.56 | 0**.**12 |
| Female | 73.81±8.54 |
| **Age Group** | | |
| 21-45 | 78.32±6.19 | 0.01 |
| 45-60 | 71.28±8.54 |
| >60 | 63.41±7.64 |
| **Frequency Dialysis (weekly)** | | |
| 1 | 80.14±6.21 | 0**.**03 |
| 2 | 76.86± 7.46 |
| 3 | 73.41±7.51 |
| >3 | 61.28 ±8.42 |
| **Co-morbidities** | | |
| Diabetes | 68.48± 5.34 | 0.05 |
| Hypertension | 76.86± 7.46 |
| Diabetes + Hypertension | 73.65±5.45 |
| Hypothyroidism | 74.84 ±4.75 |
| Others | 78.35 ±6.42 |

Age and the frequency of dialysis had a positive impact on QOL of general health (P<0.01) and there was a significant correlation (P<0.05) between QOL and co-morbidities.

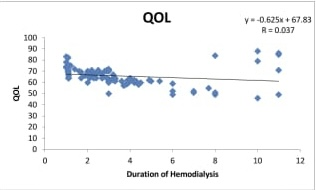


Figure 2: Scattered diagram oft he relationship between duration of hemodialysis and QOL

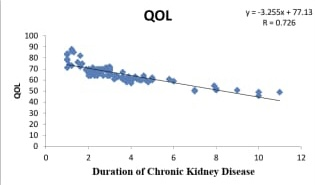


Figure 3: Scattered diagram oft he relationship between duration of chronic kidney disease and QOL.

The mean age of respondents was 53.13~53 years, comprising males (60%) and females (40%). According to the analysis, the mean duration of dialysis was 2 years with a SD of 0.22, and the monthly mean frequency of dialysis is about 2.26~twice a week. The co morbidity burden of each being is as follows: diabetes mellitus having the highest percentage of 34%, systemic hypertension having the second highest percentage of 25%, diabetes and hypertension together comprising 17%, hypothyroidism and polyarteritis nodosa having 6%, systemic lupus erythematosus having 5%, polycystic kidney disease having 2%, and diabetes with other co morbidities such as hypothyroidism, tuberculosis, and systemic lupus erythematosus having < 5% Fig 2 &3.

**Discussion**

The number of studies being conducted on the QOL of patients with chronic disease has increased recently. As a result, it is now a crucial metric for evaluating how well therapy is working and how satisfied patients are, particularly when it comes to diseases like chronic kidney disease [6] Improving QOL is the main objective of treatment for ESRD patients [12,13]. The majority of patients with end-stage renal disease (ESRD) have underlying co-morbidities, including thyroid, cardiovascular, diabetes, and hypertension [7] our study found that 17% of the patients had both hypertension and diabetes, and 34% of the patients had diabetes. The physical, psychological, social, and environmental aspects of the patient and their impact on the overall quality of life (QOL) of ESRD patients undergoing HD were the primary foci of this study. The correlation between spirituality, psychological problems, and quality of life is strongly predicted by our research [8] Numerous studies have demonstrated that routine pre-dialysis counseling contributes to better QOL by offering the appropriate education [9,10 ] Male patients with ESRD outnumber female patients, based on the numerous studies that are currently available. Men's drinking and smoking habits may be to blame for this, as they may make renal failure worse [11,12] The assessment of QOL in hemodialysis patients with end-stage renal disease was the main focus of our study. The WHOQOL-BREF questionnaire, a specialized tool to assess patients with kidney disease, was chosen to ascertain the quality of life of the study population despite the availability of several standard questionnaires. The majority of the population in the current study was found to be older than 50. The most frequent causes of renal failure, according to the results, were kidney diseases and lifestyle disorders like diabetes mellitus and hypertension, which are primarily linked to aging. While the length of dialysis may not have a substantial effect on QOL, it does have a significant correlation with sub scales such as general health perception, physical functioning, and patient satisfaction.

**Conclusion**

Since every chronic illness has a significant effect on a person's quality of life, we explored at how hemodialysis affected ESRD patients' quality of life. Our research demonstrated that the patient's quality of life had a significant impact; as patients age, their QOL declines (p<0.01). As the frequency of hemodialysis increases the QOL decreases (p<0.03). Hemodialysis education and awareness were more important for improving patients' quality of life. Longer dialysis sessions, older patients, and low socioeconomic status were all linked to lower quality of life for physical functioning. Individual relationships and social welfare were significantly impacted in patients with multiple co morbidities and higher dialysis frequency. Patients' quality of life is more significantly impacted by co morbidities (p<0.05). Patients with diabetes mellitus, hypertension, and those who have both have lower QOLs than patients with hypothyroidism and other co morbidities. Hemodialysis patients have lower emotional and physical QOL scores than people in general health. Hemodialysis plays an important and a vital treatment factor in maintaining the QOL of the patients with ESRD.

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**DECLARATION:**

**Ethics approval and consent to participate:**

Study was conducted in Dr B R Ambedkar medical college and hospital after the clearance from institutional ethics and research committee with the sl no.EC-676 dated 10th august 2018.

**Consent for publication.**

Consent from the participants were taken and only those who consented to participate were included in the study.