INFLUENCE OF DEMOGRAPHIC FACTORS ON PERCEIVED STRESS AND QUALITY OF LIFE IN PERSONS WITH CHRONIC KIDNEY DISEASE: A STUDY FROM SOUTH INDIA

Kurian Jose*	PhD Scholar, TATA Institute of Social Sciences, Mumbai *Corresponding Author
Shilpa Saji	Social Worker
Arun Thomas	Social Worker, Samskriti Sahajeevana Kendram. Kannur

ABSTRACT   *Background:* Chronic kidney disease (CKD) is a condition with progressive renal failure requiring medical management. Life in CKD is stressful as prognosis of the disease is unpredictable and patients often face social isolation. Uncertainty of life, the regular treatment and dialysis to maintain the life are major challenges encountered by every chronic patient. *Objective:* The study was conducted among chronic kidney patients under dialysis to assess the socio-demographic profile   and to find the association between quality of life and perceived stress of CKD patients. *Methods:* Sample sizes of 80 patients under dialysis in different dialysis centers at Wayanad district of Kerala were assessed of their socio-demographic information. Perceived Stress Scale (PSS) and World Health Organization Quality of Life scale (BREF) were other   tools used in the current study. *Results:* Significant number of patients undergoing dialysis in the current study were male, belonging to lower class family and were unemployed. As the age increased, the stress also increased and no significant association was clearly found between the stress and quality of life. *Conclusion:* Life in chronic disease conditions is stressful and marked reduction in the quality of life is often significant along with the poor socio-economic conditions.

KEYWORDS : Chronic Kidney Disease, Perceived Stress, Quality of life

Introduction

Chronic Kidney Disease (CKD), a progressive disease with chronicity as its outcome is defined as a progressive decline of renal mass with irreversible sclerosis and loss of nephrons over a period of months to years, depending on the underlying etiology (Verrelli,2004). Out of many aetiologies, Diabetes appears to be one of   the major causes of CKD, which is likely to be on rise as India is identified as world's leading country in number of patients with Diabetes accounting to 40.9 million and is expected to rise to 69.9 million by 2025 (Mohan, et al., 2007).   Some of the community-based studies showed the prevalence of CKD range between 0.16% and 0.79% in India (Agarwal, et al., 2005). It is estimated that, on an average, one billion population, i.e. 7.85 million CKD patients seek treatment in India (Dash, & Agarwal, 2005). Hence the prevalence of CKD being a chronic disease is one of the major health issues and it might pose a challenge against the public health initiatives of curb Non-Communicable Diseases.

The health-related quality of life   is an area of research interest. Many diseases irrespective of its progression cause burden on patient. It is the same with the patients with haemodialysis as patients over the time may perceive the poor quality of life, which might result in the occurrence of psychiatric issues. (Mapes, et al., 2003 ; Mittal, 2001). According the definition of WHO the quality of life is individual's perception of their position in life in the context of the culture and value system in which they live to achieve goals, expectations, standards, and concerns (WHOQOL, 1995).   The quality of life interferes with the various global domains of life, therefore the assessment of patients with chronic illness and their quality of life need to be done in several ways (Kimmel, 1995).Chronic disease carries psychological issues related to the process of adjustment or acceptance to the new conditions warranted by the disease and chronic kidney patients under dialysis do have the same issue (Leung, 2003).

Perceived stress refers to any emotional, mental and social difficulties faced by chronic kidney patients(Gerogianni, 2003).Patients with CKD   who undergo dialysis, are often restricted of their food and liquid and may need frequent hospitalizations. Often, they have limitations in leisure activities, and exhibit increased dependency on caregivers. They are often unemployed, which directly or indirectly cause social problems and uncertainty about their future. CKD has its impact on the family as well as it is stated that patients, caretakers /family often report loneliness, frustration, isolation, guilt, anger, neglect and loss of freedom and negative effect on their interpersonal relationship owing to sequela of the haemodialysis regiment (Gerogianni & Babatsikou, 2014). There are research gaps in assessing the socio-demographic profile, quality of life and stress among the CKD patients undergoing dialysis in developing countries like India.

Aim of the study

The study aims at assessing the quality of life, stress and   socio-demographic profile of patients with CKD under dialysis.

Methods

It was a cross- sectional, dialysis center based single contact study conducted in Wayanad district of Kerala, India. Dialysis centers affiliated with the tertiary hospitals were chosen for the study. Purposive sampling techniques were used to select the samples of the study. Eighty patients diagnosed to have chronic kidney who are currently under the dialysis were chosen for the study. Patients with any diagnosable psychiatric illness and those who are aged below18 years and above 70 years were excluded from the study. Patients diagnosed to have other serious co-morbid medical illness were also excluded from the study.

Procedure

Patients fulfilling the inclusion criteria were taken for the study after they signed the informed consent form. Then the necessary socio-demographic information was collected through the interview schedule to assess the socioeconomic backgrounds of patients through socio-demographic data sheet. WHO Quality of Life (Bref) is an instrument used to assess the individual perception of quality of life in the context of certain life situations, and suitable for assessing health related quality of life, and found to be suitable for Indian population (WHOQOL Group. The World Health Organization quality of life assessment (WHOQOL, 1995). Perceived Stress Scale, a widely used psychological instrument for measuring the perception of stressful situations in one's life and it assesses   appraisals that are stressful in life , is used in this study.(Cohen & Janicki Deverts 2010).

Statistical analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS-16.0), SPSS Inc.1989-2007. Descriptive statistic was applied on continuous variables of socio-demographic data. The Chi-square test is performed on perceived stress and quality of life scales.

Tables

Table - 1.A: Socio Demographic   Profile of patients.

Variables		Total	%
Age	18-35	13	16.2%
	36-45	26	21%
	46-55	37	46.2%
	56-65	9	11.2%
Gender	Male	58	72.50 %
	Female	22	27.50%

Religion	Hindu	33	41.25%
	Muslim	26	32.50%
	Christian	21	26.25%
Marital Status	Married	69	86.25%
	Unmarried	10	12.50%
	Divorced/separated	1	1.25%
Domicile	Urban	67	83.75%
	Rural	13	16.25%

Table 1 B : Socio-economic Status of patients

Variable		Total	%
Monthly Income	10000 – 240000	32	40%
	<10000	48	60%
Education	Illiterate / Primary	33	41.3%
	High School	26	32.5%
	Plus two/UG	16	20.0%
	PG/Above	5	6.3%
Occupation	Professional	15	18.8%
	Agriculturalist/ Shop Owner	18	22.5%
	Skilled worker	20	25.0%
	Unskilled/ Unemployed	27	33.8%
Socio-Economic Status	Upper Class	1	1.25%
	Middle Class	54	67.50%
	Lower Class	25	31.25%

Table 2 : Perceived Stress Scale & WHO Quality of Life (Bref)

Variables	x^2	Df	P
Perceived Stress	41.27	20	.003
Physical Health	32.70	13	.002
Psychological Health	27.70	11	.004
Social Relationship	122.00	7	.001
Environment	28.55	12	.005

Table 3: Correlation of Perceived Stress with Quality of Life (Bref)

Variables	Physical Health	Psychological Health	Social Relationship	Environment
Perceived stress	.068	.118	.001	.001

** Correlation is significant at the 0.01 level (2-tailed)

Results

Table-1 shows that 46.2% (37) of the total sample population selected belong to the age group of 46-55. Gender wise analysis shows that 72.50% (58)   of the total population are men and 69 of   the sample population are married and live with the partner. The study also pointed out that 83.75% (67) of the patients hail from urban areas.

Socioeconomic data (Table 2) shows that 60% (48) of patients have less than ten thousand rupees of monthly income, and 33.8 % of the total sample population are either unskilled or unemployed. The table-3 showed the significant stress level among the selected population (p <0.05) and even in all the quality of life domains the same finding could be noted. Significant correlation was found between the perceived stress and quality of life in the domains of social relationship and environmental health.

Discussion

Patients diagnosed to have CKD, under continuous dialysis need to spend their significant part of life in treatment and spend a lot of time in dialysis centres. This study clearly indicates that patients with chronic kidney disease have gross problems in employability. The current study highlights that the monthly income of the selected population is significantly low and may not support the expenses incurred in the treatment as well as maintenance of life. Research by Suja, et.al, estimated average cost incurred by a person under dialysis in Kerala and categorized   the cost into , medical, non-medical and other expenses of intangible / opportunity cost (Suja, et al., 2012). If we compare the monthly earnings of patients in the current study with the estimated expenses of treatment based on the previous research, then it is clear that the person may have to depend on the other sources of income, than the monthly earnings. These sources   include the extent of support from community, role of charitable agencies, religious and non-religious groups support and such other helps generated out of charity-oriented dialysis centres yet to be researched. The current study supports the previous researches that socio-

demographic parameters can influence the quality of life of people under chronic diseases. (Manavalan, et al., 2017).

 Rapid decline in the quality of life in chronicity of illness may affect many areas of perceived quality of a person's life. Previous Indian and western researches also agree with the same findings that perception of quality of life reduces in each stage of CKD (Cruz, et al., 2011 ; Abraham & Ramachandran, 2012; Joshi, 2014). Although it needs to be longitudinally assessed, subjective assessment of their perception in this study   is   an indicative in stating that the patients under dialysis   perceive low quality of life in the domains of ' physical health', ' psychological health', and 'social relationship'. Patients attending the dialysis centre in this study have significant level of stress, and it supports the previous researches that patients under dialysis experience more stress on those domains of physical and socio-economic aspects.(Juliana, & Arjunan, Porkodi 2015 ; Kumar, 2003).

This research further explored the correlation of stress and quality of life. The study also found that in two domains of social relationship and environmental health, stress is correlated.

 Patient undergoing dialysis may be restricted to the limited space of a dialysis centre and to the home atmosphere owing to many medical reasons. This   restricted life acts as a barrier for   social interaction with the people in the community, to establish personal relationship, to seek social support and to engage in the personal life including sexual activity.

Chronic illness causing deterioration in quality of life is reported in different researches (Al-Jumaih, 2011 ; Nonoyama, 2010). In our study also we could find that in the sub- domains of quality of life such as financial resources, safety and recreation needs, patients perceived poor quality of life and this supports the previous researches that chronic illness can cause deterioration in quality of life.

Conclusion

The current research was carried out to assess the influence of socio-demographic data of patients under dialysis and to assess their quality of life and stress. The stress and quality of life of patients undergoing dialysis is inadequately researched from states like Kerala. The poor socioeconomic status of CKD patients in this study may be an indication about the debilitating financial conditions individuals under dialysis.

Individuals under CKD might discontinue the treatment due to financial crisis and hence government must take measures to help people under CKD by making changes in the existing health policies and financial schemes to minimize the burden of diseases. This study suggests that the patients with CKD have a poor quality of life and there is a necessity to make their lives better so that they will be stress free to excel in their lives with improved quality of life with multiple interventional measures. Longitudinal studies are needed to assess the level of stress and quality of life in each stage of CKD.

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