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Original Research Article

Burden and treatment seeking behaviour in chronic kidney disease patients: a cross-sectional descriptive study

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ABSTRACT

Background: CKD is a debilitating condition accountable for high morbidity and an overall burden on society and Government. The study objectives were to assess the burden and treatment seeking behaviour of CKD patients and to determine the association of demographic variables with burden and treatment seeking behaviour in CKD patients.
Methods: A Descriptive survey research design was conducted on CKD Patients. 220 CKD patients were selected and a self-structured burden rating scale was used to assess the level of burden and treatment seeking behaviour checklist was used to find out the level of treatment seeking behaviour in CKD patients. Data were collected through face to face or telephonic interview by using non-probability convenient sampling technique.
Results: Among 220 patients, majority of CKD patients had hypertension as comorbidity. More than half of CKD patients had moderate level of burden. CKD patients had highest burden in emotional domain. Majority of CKD patients 'feel muscle cramps' in level of burden. More than half of CKD patients had fair level of treatment seeking behaviour. CKD patients had highest treatment seeking behaviour in personal domain. There was significant association of burden and treatment seeking behaviour with demographic variables.
Conclusions: Majority of CKD Patients had moderate level of Burden and fair level of treatment seeking behaviour. It was found that there was a significant association of burden and treatment seeking behaviour with demographic variables. The health care seeking behaviour of CKD patients drive them to come for treatment.

Keywords: CKD, Burden, Treatment seeking behaviour

INTRODUCTION

Kidney is the main organ of the urinary system which plays an important role to regulate the volume and composition of extra cellular fluid and waste products from the body. It regulates the body electrolytes, controlling the acid-base balance and it also performs endocrine functions.[1] Chronic kidney disease (CKD) is a condition that's characterized by slowly or gradual loss of kidney functions over the time.[2] CKD describes that abnormal structure and function of kidney present for more than three months including kidney damage and glomerular filtration rate (GFR) is less than 60ml/min/1.73 m2.[3] Hypertension and diabetes mellitus are the most common cause of development of CKD.[4,5] Early detection and treatment can prevent to development of advance stage of CKD. If CKD developed into advanced stage of diseases i.e., end-stage kidney disease (ESRD), it can result to kidney failure that requires Dialysis or other alternative that's renal transplantation to maintain the quality of life.[2]

CKD, increases with age, and affects one person total of 10 in general population, and only 4 per 100,000 will advanced into ESRD (end stage renal disease).[6] It is found that between the ages of 65-74 years; about one in five men and one in four women has some extent of CKD.[4]

According to 3rd NHANES III (national health and nutrition examination survey) data, among patients older than 70 years, the prevalence of CKD was 37.8%. Age is an independent predictor of CKD, besides hypertension and diabetes mellitus.[5] In India, the prevalence of CKD was observed to be 17.2% with about~ 6% having CKD Stage 3 or worse.[7] The treatment of CKD should be started as early as diagnosed. The sooner the treatment of CKD, better will be the disease prognosis or to improve health and prevent comorbidities (hypertension, diabetes mellitus, etc.) associated with CKD. The main modalities in CKD to control the high blood pressure and reduce the blood sugar level. In advanced stages of CKD involves the dialysis and renal transplantation to maintain the quality of life.[9] The mortality rate of CKD increased from 1990 to 2017 up to 41.5%, rising from 17th leading cause of death to 12th.[10] These data showed to the need for the implementation of appropriate treatment seeking behaviour and health promotion information about CKD and its associated comorbidities. Therefore, health care professionals will have to more involved in not only treating the patient's symptoms, but also promoting and educating patients, caregivers as well as the general public on the consequences of CKD. The objectives of study were to assess the burden and treatment seeking behaviour of CKD patients and to determine the association of demographic variables with burden and treatment seeking behaviour in CKD patients.

METHODS

Research design, setting and data collection

A descriptive survey study was conducted among CKD patients from September to October 2020 in the nephrology OPD of hospital. Data were collected through validated self-structured questionnaire with help of face to face and telephonic methods. We have adopted non-probability convenient sampling technique for data collection.

The sample size was calculated by using formula; Z2 × (P) (1 − P)/d2 where Z=1.96, P=percentage picking a choice and d= confidence interval, and minimum estimated sample size needed was 216 approximately. An overall sample of 220 CKD patients was selected.

Study participants

The participants were recruited via non-probability convenient sampling technique following inclusion criteria, CKD diagnosed at least since 6 months, age more than 18 years, who is able to speak Hindi and English language and who were willing to participate in the study.

Data collection instruments

A self-structured questionnaire was used for data collection, which was validated by different experts and found reliable in pilot study. The questionnaire consisted three sections; demographic variables (age, gender, marital status, occupation, religion, occupation, education, diagnosed CKD since, income of family and comorbid health conditions); rating scale for assessing burden (physical, psychological, emotional and financial domain) and; checklist for assessing treatment seeking behaviour (personal, hospital, family and financial domain). The CKD patients were categorized into three parts for assessing burden on the basis of scores; mild (18-26), moderate (27-40), and severe (41-54) and same for assessing treatment seeking behaviour; good (12-16), fair (8-11), and poor (≤7).

Data analysis

Descriptive and inferential statistics were used for analysis of data with SPSS version 20 as per the study objectives. Descriptive statistics like frequency, percentage and inferential statistics like X^2 was used for the analysis of the data. Data were interpreted and depicted with the help of tables, charts, bar graphs, etc.

RESULTS

Total of 220 CKD patients the study findings showed that approximately one-third of CKD patients (33.6%) were of 50 to 65 years of age. More than half of them (58.6%) were male and about 75.5% were married. 24.5% CKD patients were unemployed and approximately two-third (64.5%) of them were Hindu. More than one-third of CKD patients (38.6%) had primary education and 37.3% were diagnosed CKD since 2-3 years. About 77.8% CKD patients had hypertension as comorbidity in CKD patients (Table 1).

The study showed that 60.5% CKD patients were having moderate level of burden followed by 28.6% mild level of burden and about 10.9% CKD patients were having severe level of burden (Figure 1). It was found that CKD patients had highest burden in emotional domain (mean %=66.78) followed by physical domain (mean%= 65.47). CKD patients had lowest burden in financial domain (mean%=45.12) followed by psychological domain (mean%= 45.74). In the current study found that highest burden in CKD patients were having 'feel muscle cramps' with the mean i.e., 2.43 and least level of burden had 'fear of death' with the mean 1.15. For assessing the level of treatment seeking behaviour in CKD patients found that 63.2% of CKD patients were having fair level of treatment seeking behaviour followed by 25.5% good level of treatment seeking behaviour and about 11.4% CKD patients were having poor level of treatment seeking behaviour (Figure 2).

In CKD patients the highest treatment seeking behaviour in personal domain (mean%=70.58) followed by hospital domain (mean%=68.8). CKD patients had lowest treatment seeking behaviour in family domain (mean%= 29) followed by financial domain (mean%= 57) (Figure 3).

Table 1: Distribution of CKD patients as per demographic variables (n=220).

Demographic variables	f	%
Age (years)		
18-35	40	18.2
35-50	62	28.2
50-65	74	33.6
65 and above	44	20
Gender		
Male	129	58.6
Female	91	41.4
Marital status		
Married	166	75.5
Unmarried	19	8.6
Widow/ widower/separated	35	15.9
Occupation		
Unemployed	54	24.5
Government job	41	18.6
Private job	43	19.5
Business	29	13.2
Others	53	24.1
Religion		
Hindu	142	64.5
Muslim	76	34.5
Sikh	03	0.9
Education		
Illiterate	50	22.7
Primary	85	38.6
Secondary	54	24.5
Graduation and above	31	14.1
Diagnosed CKD since		
6 month-1 year	14	6.4
1-2 year	69	31.4
2-3 year	82	37.3
3-4 year	55	25
Income of family		
≥52,734	49	22.3
26,355-52,733	46	20.9
19,759-26,354	62	28.2
13,161-19,758	40	18.2
7,887-13,160	22	10
2,641-7,886	01	0.5
Comorbid health conditions*		
Yes	220	100
No	0	0
Diabetes	35	15.9
Hypertension	171	77.8
Neurological disorders	15	6.9
Asthma/COPD	13	5.9
Peripheral vascular disease	06	2.8
Musculoskeletal disorders	07	3.2
Heart disease	26	11.9
Others	17	7.8

*Comorbid Health conditions having multiple response.

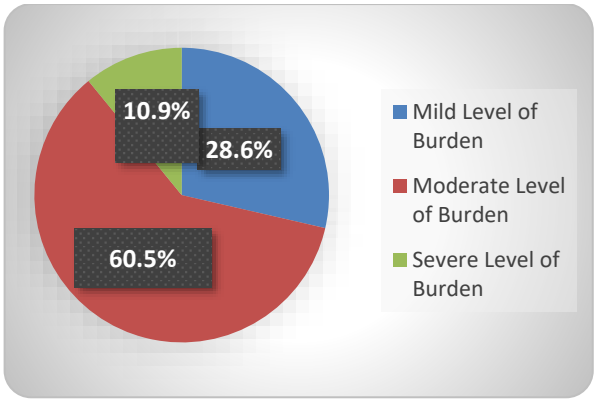

Figure 1: Level of burden in CKD patients.

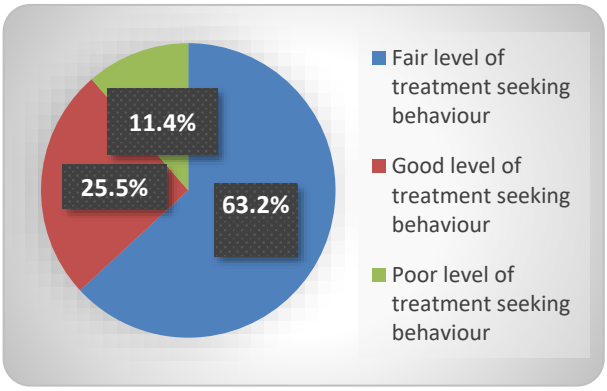

Figure 2: Level of treatment seeking behaviour in CKD patients.

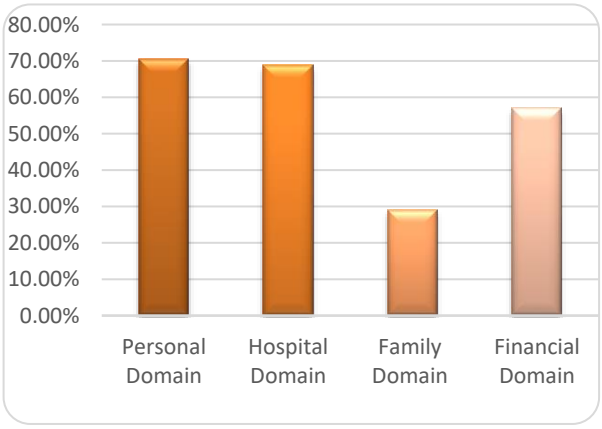

Figure 3: Mean % of domains of treatment seeking behaviour in CKD patients.

In this study the highest level of treatment seeking behaviour in CKD patients were 'think that health care provider values respect and dignity and their behaviour is appropriate' with the mean i.e., 0.64 and least level of treatment seeking behaviour was 'feel rejected or affect the relationship with family members because of disease condition' with the mean 0.20.

The study showed that there was association of burden with demographic variables; it was found that there was

significant association of age, religion, education, duration of disease with burden in CKD patients (Table 2). The study showed that there was significant association of age, gender, marital status, occupation, education, duration of disease with treatment seeking behaviour (Table 3).

Table 2: Association of burden of CKD patients with demographic variables (n=220).

Demographic variables	Burden			X^2	df	P value
	Mild	Moderate	Severe			
Age (years)						
18-35	25	13	02	42.9	6	0.00*
35-50	24	33	05			
50-65	11	53	10			
65 and above	03	34	07			
Gender						
Male	38	78	13	0.27	2	0.87NS
Female	25	55	11			
Marital status						
Married	50	100	16	7.65	4	0.10NS
Unmarried	08	10	01			
Widow/ widower/separated	05	23	07			
Occupation						
Unemployed	10	35	09	19.27	8	0.10NS
Government job	16	23	02			
Private job	17	23	03			
Business	03	19	07			
Others	17	33	03			
Religion						
Hindu	46	79	17	10.09	4	0.03*
Muslim	15	54	07			
Sikh	02	00	00			
Education						
Illiterate	07	33	10	24.14	6	0.00*
Primary	18	60	07			
Secondary	22	26	06			
Graduation and above	16	14	01			
Diagnosed CKD since						
6 month-1 year	08	06	00	28.3	6	0.00*
1-2 year	32	31	06			
2-3 year	17	56	09			
3-4 year	06	40	09			
Income of family						
≥52,734	08	34	07	11.29	10	0.33NS
26,355-52,733	13	28	05			
19,759-26,354	22	31	09			
13,161-19,758	14	23	03			
7,887-13,160	06	16	00			
2,641-7,886	00	01	00			

*Significant (p<0.05), NS-Non significant (p>0.05)

Table 3: Association of treatment seeking behaviour of CKD patients with demographic variables (n=220).

Demographic variables	Treatment seeking behavior			X^2	df	P value
	Good	Fair	Poor			
Age (years)						
18-35	21	19	00	42.41	6	0.00*
35-50	21	40	01			
50-65	10	50	14			
65 and above	4	30	10			

Continued.

Demographic variables	Treatment seeking behavior			X^2	df	P value
	Good	Fair	Poor			
Gender						
Male	42	67	20	17.12	2	0.00*
Female	14	72	05			
Marital status						
Married	42	106	18	10.17	4	0.03*
Unmarried	09	10	00			
Widow/ widower/separated	05	23	07			
Occupation						
Unemployed	09	38	07	16.02	8	0.04*
Government job	15	24	02			
Private job	17	22	04			
Business	7	16	06			
Others	08	39	06			
Religion						
Hindu	38	87	17	7.036	4	0.134NS
Muslim	16	52	08			
Sikh	02	00	00			
Education						
Illiterate	05	33	12	42.01	6	0.00*
Primary	16	59	10			
Secondary	15	37	02			
Graduation and above	20	10	01			
Diagnosed CKD since						
6 month-1 year	10	04	00	26.79	6	0.00*
1-2 year	21	45	03			
2-3 year	18	52	12			
3-4 year	07	38	10			
Income of family						
≥52,734	13	30	06	3.22	10	0.97*
26,355-52,733	13	28	05			
19,759-26,354	15	42	05			
13,161-19,758	11	24	05			
7,887-13,160	04	14	04			
2,641-7,886	00	01	00			

*Significant (p<0.05), NS-Non significant (p>0.05).

DISCUSSION

In the present study, about 60.5% CKD patients were having moderate level of burden, 28.6% were having mild level of burden and 10.9% had severe level of burden. Majority of the CKD patients 63.2% had fair level of treatment seeking behaviour, 25.5% were having good level of treatment seeking behaviour and 11.4% were having poor level of treatment seeking behaviour.

In this study, burden and treatment seeking behaviour was significantly associated with the demographic variables. A similar study conducted by Taslim et al revealed that majority of CKD patients (71.2%) having appropriate health care behaviour.[9] In the current study, findings show that the most common level of burden in CKD patients were having 'muscle cramps' followed by 'feeling excessive tiredness'. A study conducted by Abeywickrama et al revealed that the most common level of physical burden was bone\joint pain.[11] Another study conducted by Sameera et al revealed that majority of patients were having bone\joint pain as most experienced symptom and the most severe symptom was loss of libido.[12] A similar study conducted by Almutary et al showed that majority of CKD patients were having common symptoms such as fatigue, pain, feeling drowsy and pruritus.[13] The current study findings showed that most common comorbidity related to CKD was hypertension (77.8%) and diabetes mellitus (15.9%). A similar study conducted by Fasipe et al showed that majority of CKD patients were having two comorbidities such as hypertension and diabetes mellitus.[14] Another study conducted by Gurukkal et al revealed that the comorbidities that causes CKD was diabetic nephropathy, chronic glomerulonephritis and hypertensive nephropathy.[15] A study conducted by Fraser et al revealed that hypertension was the most common comorbidity found in CKD patients.[16]

In the present study reveals that there was statistical significant association of level of burden with demographic variables like age, religion, education and duration of disease. There was also Statistical significant association of level of treatment seeking behaviour with demographic variables like age, gender, marital status, occupation, education, duration of disease regarding CKD. A similar study conducted by Bapatet et al revealed that gender, marital status and occupation were significantly associated with acceptance of their treatment.[17]

CONCLUSION

CKD is most common disease all across the world and mainly in developing and underdeveloped countries. In India also, CKD most common disease in middle and old age population, but now a day's younger population also start to face it. The current study showed that 60.5% of CKD patients had moderate level of burden and 63.2% of them had fair level of treatment seeking treatment. There was significant association of burden and treatment seeking behaviour with demographic variables. Patients with all stages of CKD experience overall Burden that can be; physical, psychological, emotional and financial burden warranting rigorous measure to relieve Burden and to improve the well-being of CKD patients. High disease burden and poor treatment seeking behaviour among CKD patients is a major health problem in India. Unacceptable burden and treatment seeking behaviour among CKD patients should be brought to notice of health care providers caring for CKD patients and health policymakers.

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