

Assessment of Physiological and Psychosocial Problems in Chronic Kidney Disease Patients with a View to Develop the Nursing Intervention Strategies

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Abstract— Any chronic illness is a potential life crisis for patients and their families. Chronic kidney disease is no different, in fact it is physical, psychosocial and economic burden to patient and family as well. One of the most important life-threatening chronic illnesses that are growing worldwide is chronic kidney disease. It is a gradual and progressive loss of the ability of the kidneys to function normally. The change is irreversible and is due to loss of nephron of kidney. Aim: the aim of study was to assess the physiological and psychosocial problems of chronic kidney disease patients in view to develop the nursing intervention strategies and to find the correlation between them. A quantitative (descriptive) approach was chosen for chronic kidney disease patients in dialysis unit of selected hospital of Ludhiana, Punjab. By using Purposive sampling technique chronic kidney disease patients who fulfilled the inclusion criteria were selected as samples. Physiological and psychosocial problems were assessed by interview schedule. mean age of subjects was 37-54yrs, males from nuclear families. Majority of the subjects were non-working (53.3%) with more than 36 months duration of treatment (53.3%), (53.3%) no of patients with stage iii chronic kidney disease and a greater number of patients found on stage iv (66.7%). conclusion: findings of the study revealed that two third of the subjects had insomnia 11(73.3%), restless leg syndrome 11(73.3%) and moderate to severe psychosocial problems like health awareness 3(20%), occupational problems 9(60%), family and social environment problems 9(60%), financial problems 7(46.7%) and psychological distress problems 6(20%). Appropriate nursing intervention strategies need to be made to improve their quality of living.

Keywords— Assessment, chronic kidney disease, physiological problems, psychosocial problems.

I. INTRODUCTION

Chronic kidney disease is increasingly recognized as global public health problem. The incidence and prevalence of end-stage renal disease is growing worldwide and has doubled in the last 15 years. In India, there are no reliable statistics on kidney patients. According to figures from the West, India could have at least 100,000 cases of end-stage renal disease (ESRD) each year.¹

Chronic kidney disease is defined as a progressive kidney damage the higher chronic kidney disease (CKD) stage the more severe the renal insufficiency. The importance of the individual's ability to manage the disease in earlier stage is, to prevent or slowdown the progress, has gained increased attention. Adherence to medication and diet prescription are substantial in the efforts to slowdown disease progress and prevent secondary complications. (Chronic kidney disease) CKD stages 1–3 is usually not associated with symptoms. However, in stage 4, symptoms accumulate, rather often insidious. Common symptoms appearing with renal insufficiency are fatigue, insomnia, edema, restless leg syndrome, depressive symptoms and cognitive dysfunction.²

Chronic kidney disease (CKD) shortens life expectancy and frequently causes severe functional disability. Enhancing the patient's quality of life during every stage of the disease is one objective of nursing care. These patients' perceptions of their quality of life are influenced by factors such late referral to specialist treatment, poor care during the early stages of

CKD, and the physical, psychological, and social impacts of the disease (National Kidney Foundation (NKF), 2000).²

Because treatment for chronic kidney disease (CKD) is costly and lifelong, it poses a threat to world health in general and to impoverished countries in particular. It is 3 to 4 times more frequent in Africa than in developed countries while accounting total annual deaths of Egyptians from 1 to 1.5%. Black Americans are 5 times more affected with chronic kidney disease than whites due to poverty.³

The purpose of care is to assist patients in managing their medical problems and to provide them the tools they need to become more knowledgeable, capable, autonomous, and self-sufficient in managing their disease and their daily lives.⁴

In conclusion, it comes down to fostering and enhancing the patient's capacity for self-care. Being involved is being aware of one's health state, understanding it, and being able to participate in plans and choices affecting one's own care. In this sense, self-care might be defined as the tasks necessary for living a disease-free daily existence. Knowing how to take care of oneself includes being competent in health-related tasks (Orem, 1985).⁵

Living with end stage chronic kidney disease is a dynamic experience characterized by periods of stability, instability, and regained stability during the course of the illness trajectory. Increasing numbers of patients are being diagnosed with chronic kidney disease, related in part to an aging population, and will continue to escalate as the 21st century unfolds.⁶

Chronic kidney disease provokes enormous physical and psychological changes in patients. Among the physiological and psychological stressors experienced by these patients, uncertainty about the future has been ranked as a major source of stress. Similarly, in a number of studies on family members' responses to chronic illness, uncertainty has also been identified as a prominent negative experience.⁷

One of the biggest and most difficult issues a nurse has to deal with when caring for patients with chronic renal failure is psychosocial changes in the patient. Clients often suffer from role reversal, loss or curtailing of employment, and multiple lifestyle changes. Scheduling dialysis can create many difficulties. The client's self-concept and body image may change, which could cause further issues at work and in relationships. Depression can be very severe and, in some clients, may precipitate in suicide.⁸

Various studies conclude nurses enable access to programmes designed to reduce the impact of chronic disease on individuals managing their symptoms in home and community settings. They also have a positive impact on patient satisfaction and care quality, suggesting that the level of patient engagement with strategies intended to improve their health within the context of chronic illness may be enhanced through the participation of nurses in those chronic disease management programmes.⁹

A cross-sectional survey was conducted to see the prevalence of chronic kidney disease from year 1999-2004 in three phases which revealed that the hypertension, diabetes mellitus and obesity are the leading risk factors of chronic kidney disease. Findings showed the incidence of 37000 patients with physiological and psychosocial problems increasing each year.¹⁰

Various studies have emphasized the impact of various preventive approaches such as: strict adherence to renal diet,¹¹ relaxation therapies,¹² massaging, exercises and interaction sessions in modifying the life style patterns to self-regulate and improve the physical and social functioning of chronic kidney disease patients,¹³ thereby alleviating their distressing physiological and psychosocial dilemmas with better clinical outcomes.¹⁴

II. METHODS AND MATERIALS

The study employed a quantitative(descriptive)design. The population comprised OF 30 chronic kidney disease patients. Convenience sampling was used to recruit participants who were admitted in Mohan dai Oswal hospital, Ludhiana.

The study tools used for data collection were questionnaire consisted of two sections I contained demographic variables and clinical variable of the chronic kidney disease patient such as age, gender, family structure, educational status, occupation, monthly family income, co- morbidity duration under treatment, stages of chronic kidney disease and frequency of dialysis.

Psychosocial problems were assessed by using psychosocial assessment tool which consist of 5 domains with total no of items 37. It consists of questions on various domains such as health awareness domain (8 items), occupational domain (6 items), family and social environment

domain (10 items), financial domain (6 items) and psychological distress domain (7 items). the tool was converted into local language of study subjects.

The reliability of tools by test-retest method was 0.8. After obtaining the permission from significant authorities, data was collected from chronic kidney disease patients after obtaining written consent. Appropriate descriptive and inferential statistics was used to analyse data, p value was considered as level of significance.

III. RESULTS

A. Sociodemographic characteristics of the subjects

The majority (55.8%) of the study participants were in the age group of 55-72 years. More than Half (66.7 %) of the study participants were male and approximately two third (66.7%) of the study participants belong to nuclear family. Almost Half (46.7%) of them had 10th pass education and almost half (53.3%) of the study participants were non-working and 53.3% of study participants were from lower income group. Every second (53.3%) study participants having the duration under treatment was more than 36 months in experimental group. Majority (53.3%) of the study participants were in stage III of chronic kidney disease. All the patients with chronic kidney disease (100%) were on hemodialysis and no one fall under category of peritoneal dialysis.

B. Distribution of physiological health problems

TABLE 1: Frequency and percentage distribution of physiological health problems according to levels among patients with chronic kidney disease

Levels of physiological problems	N=30		
	Insomnia score f (%)	Fatigue score f (%)	Restless leg syndrome score f (%)
No	6(20%)	-	12(46.7%)
Low	2(6.7%)	8(26.7%)	4(33.3%)
High	22(73.3%)	22(73.3%)	14(20%)

Table I depicts frequency and percentage distribution of physiological health problems according to levels of score among patients with chronic kidney disease.

The data showed that out of 30, two third of the chronic kidney disease patients had high level of insomnia 22(73.3%), and fatigue score 22(73.3%) and low level of restless leg syndrome score 4(33.3%).

Thus, it is evident that majority of the subjects had high level of physiological problems.

C. Distribution of psychosocial health problems

TABLE 2: Frequency and percentage distribution of psychosocial health problems according to levels among patients with chronic kidney disease

Psychosocial problems	Levels of problem		
	Mild	Moderate	Severe
Health awareness domain	22(73.3%)	6(20%)	2(6.7%)
Occupational domain	4(13.3%)	18(60%)	8(26.7%)
Family and social environment domain	8(26.7%)	18(60%)	4(13.3%)
Financial domain	6(20%)	14(46.7%)	10(33.3%)
Psychological distress domain	12(40%)	6(20%)	12(40%)

Table 2 depicts frequency and percentage distribution of psychosocial health problems according to levels of score among patients with chronic kidney disease.

The data showed that out of 30, every second of the chronic kidney disease patients had moderate level of psychosocial problems i.e 18(60%) in occupational domain, 18(60%) in family and social domain, 14(46.7%) in financial whereas majority 22(73.3%) had mild level of health awareness problems. In the psychological domain equal no 12(40%) of chronic kidney disease patients had mild and severe level of problem.

Thus, it is evident that majority of the subjects had high level of psychosocial problems.

E. Correlation between physiological and psychosocial health problems

TABLE 3: Correlation between physiological and psychosocial problems among patients with chronic kidney disease

N=30

Psychosocial problems	Physiological problems					
	Insomnia score		Fatigue score		Restless leg syndrome score	
	r	p	r	p	r	p
Health awareness domain	.496**	0.001	.542**	0.000	.521**	0.000
Occupational domain	.455**	0.002	.569**	0.000	.406**	0.006
Family and social environment domain	.318*	0.033	.626**	0.000	.298*	0.47
Financial domain	.157	0.303	.261	0.084	-0.069	0.651
Psychological distress domain	.181	0.234	.587**	0.000	.137	0.371

Table 3 showed correlation between selected physiological problems (insomnia, fatigue and restless leg syndrome) and psychosocial problems among chronic kidney disease.

Findings unveiled that health awareness occupational problems, family and social environment, financial problems and psychological distress have shown a significant positive correlation (p value ≤ 0.05) with their 3 physiological problems such as: insomnia, fatigue and restless leg syndrome of Chronic kidney disease patients except there is negative correlation found between family and social environment as well as psychological distress with restless leg syndrome. Since findings has shown the significant (p value ≤ 0.05) positive correlation with 2 physiological problems such as: insomnia, fatigue whereas family and social environment and psychological distress has shown the negative (positive correlation with 1 physiological problems i.e. restless leg syndrome).

Thus, it is found that there is a positive correlation between physiological and psychosocial problems.

IV. DISCUSSION

In the present study two third of the chronic kidney disease patients had high level of insomnia 22(73.3%), and fatigue score 22(73.3%) and average number of chronic kidney

disease patients had moderate (46.7%) to severe (73.3%) psychosocial problems. These findings are supported by Fliss E.M. Murtagh¹⁵ on 66 patients reported Symptoms reported by more than one third of patients were: lack of energy, pruritus, drowsiness, dyspnea, edema, bone pain, dry mouth, muscle cramps, restless legs, lack of appetite, poor concentration, dry skin, sleep disturbance and constipation.

V. CONCLUSION

The present study revealed the low to high physiological problems like insomnia, fatigue and restless leg syndrome and moderate to severe psychosocial problems in chronic kidney disease patients. Based on the result investigator has prepared the nursing intervention strategies to decrease the level of physiological and psychosocial problems in chronic kidney disease patients. Similar studies can be conducted on larger sample with different settings. But the present study was delimited to single setting only.

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Conflict of Interest: None

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