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Assess the risk factors predisposing to renal diseases among patients admitted in a selected hospital in Malappuram

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ABSTRACT

The kidneys are the principal organ for the urinary system. The primary function of the kidneys are to regulate the volume and composition of extracellular fluid and to excrete waste products from the body. In addition, the kidneys function to control blood pressure, produce erythropoietin, activate vitamin D and regulate acid – base balance. Renal disorders encompass a wide spectrum of clinical problems. The diverse cause of these disorders may involve infectious, collagen – vascular, traumatic, congenital, neoplastic and neurological mechanisms***Aim of the study:*** *To assess the risk factors predisposing to renal diseases* ***Methodology:*** *A quantitative approach non-experimental correlational retrospective research design was used for the study. Thirty samples from selected hospital in Malappuram, Kerala, India, were selected by non probability convenient sampling technique. Socio-demographic data were assessed using socio-demographic performa, semi structured interview schedule and checklist for assessing risk factors predisposing to renal diseases. Data were analyzed and interpreted by descriptive and inferential statistics.* ***Results and conclusion:*** *The analysis revealed that 70 % of patients have moderate risk factors, 17 % of patients have severe risk factors and 13 % of patients have mild risk factors predisposing to renal diseases using semi–structured interview schedule and by using checklist 60 % of patients have moderate risk factors and 40 % of patients mild risk factors predisposing to renal diseases. There is no significant association between predisposing risk factors and renal diseases (p-value>0.05).*

Key words: *Renal diseases, Predisposing risk factors.*

INTRODUCTION

The kidneys are the principal organ for the urinary system. The primary function of the kidneys are to regulate the volume and composition of extracellular fluid and to excrete waste products from the body. In addition, the kidneys function to control blood pressure, produce erythropoietin, activate vitamin D and regulate acid – base balance. Renal disorders encompass a wide spectrum of clinical problems. The diverse cause of these disorders may involve infectious, collagen – vascular, traumatic, congenital, neoplastic and neurological mechanisms. Renal disease is growing rapidly in India because of the high prevalence of diabetes and heart disease which is the root cause of renal disease. The mean age of the renal disease patient in India is between 32-42 years compared to 60-63 years in developed countries. High quality screening, prevention and treatment service are very important. A human body can maintain homeostasis until 90% of nephrons lose its function.It was found that 10% of the people worldwide is affected with kidney disease and claims life of millions due to inaccessibility to affordable treatment according to Global burden of disease. In 2010,Chronic Kidney Disease was in the 18th position which was previously ranked as 27th in 1990. In India it was estimated that 3,000,00 people were diagnosed with Chronic Kidney Disease and dying due to kidney diseases.

METHODOLOGY

A quantitative approach non-experimental correlational retrospective research design was chosen for the study. The sample comprised of 30 patients suffering from renal diseases in inpatient and outpatient department in nephrology and urology department of selected

hospital, Malappuram, Kerala, India by non probability convenient sampling technique was used in this study. After taking the consent, data were collected using socio-demographic performa, semi-structured interview schedule and checklist. Data was analyzed and interpreted by using descriptive and inferential statistics.

RESULTS AND DISCUSSION

Section I – Distribution of socio demographic characteristics of patients with renal disease.

Table 1 : Frequency and percentage distribution of patients with renal disease according to age, gender and level of education.

(n=30)

Variables	Category	Frequency (f)	Percentage(%)
Age	20-30 years	1	3.33%
	30-40years	1	3.33%
	40-50years	4	13.33%
	50-60years	2	6.66%
	>60years	22	73.33%
Gender	Male	11	36.66%
	Female	19	63.33%
Level of education	Illiterate	9	30%
	Up to higher secondary	20	66.66%
	Graduation	1	3.33%

Table 1 shows that majority of the patients (73.33%) belongs to the age group of above 60 years, 13.33% is included in the age group of 40–50 years, 6.66% in age group of 50-60 years, 3.33% belongs to the age group of 30-40 years and remaining belongs to 20-30years age group (3.33%). 63.33% of the study participants are females and 36.66% participants are males. And also 67% study participants having higher secondary education, 30% are illiterate and graduates constitute 3%.

(n=30)

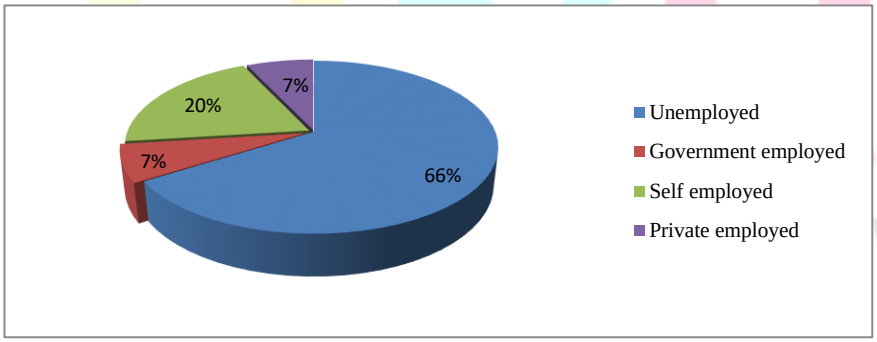

Figure 1 : Frequency and percentage distribution of patients with renal disease based on occupational status.

Figure 1shows that majority of the study participants (66%) are unemployed, self employed participants holds 20%, 7% participants is government employs and participants occupied in private firm hold 7%.

Table 2 : Frequency and distribution of patients with renal disease based on marital status, type of family and average monthly income.

(n=30)

Variables	Category	Frequency (f)	Percentage(%)
Marital status	Married	23	76.66%
	Unmarried	1	3.33%
	Widow	6	20%
Type of family	Nuclear family	9	30%
	Joint family	21	70%
Average monthly income	<1000	8	26.66%
	1000-5000	16	53.33%
	5000-10000	5	16.66%
	Above10000	1	3.33%

Table 2 shows that 76.66% of the patients are married, 3.33% is unmarried and 20% are widowed. 70% of the patients belongs to joint family and remaining 30% belongs to nuclear family. 53.33% belongs to average monthly income of 1000-5000, 26.66% belongs to <1000, 16.66%belongs to 5000-10000 and remaining 3.33% belongs to >1000.

(n=30)

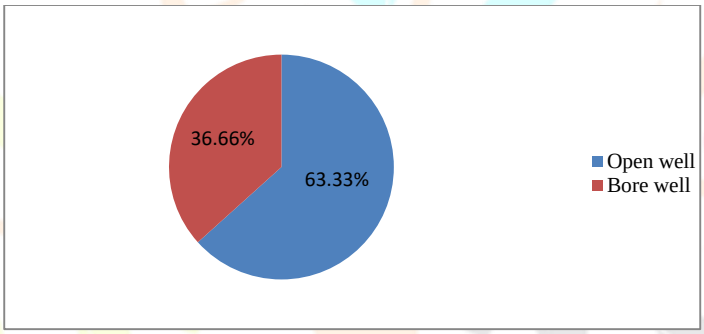

Figure 4 : Percentage distribution of patients with renal disease based on source of water .

Figure 4 shows that 63.33% of patients were having open well and 36.66 % have bore well as source of water.

Table 3 : Frequency and percentage distribution of patients with renal disease based on type of latrine and source of health information.

(n=30)

Variables	Category	Frequency(f)	Percentage(%)
Type of latrine	Indian	13	43%
	European	17	57%
Source of health information	Health care provider	21	70%
	Friends and neighbours	1	3.33%
	Media including social media	7	23.33%
	0thers	1	3.33%

Table 3 reveals that 57% of the study participants were having European type latrine and 43.3% of the participants were having Indian type latarine.70% of participants gets health information from health care provider and 23.33% gets health information from media including social media.

Section II

Assessment of risk factors predisposing to renal disease.

Table 4 : Frequency and percentage distribution of risk factors predisposing to renal disease using interview schedule.

(n=30)

Grade	Frequency(f)	Percentage(%)
Mild	4	13%
Moderate	21	70%
Severe	5	17%

Table 4 shows that 70% of the study participants have moderate risk factors, 17% with severe risk factors and remaining 13% have mild risk factors.

Table 5 : Frequency and percentage distribution of risk factors predisposing to renal disease using checklist.

(n=30)

Grade	Frequency(f)	Percentage(%)
Moderate	18	60%
Mild	12	40%

Table 5 reveals that 60% suffer with moderate risk factors and 40% have mild risk factors.

Section III

Association between risk factors predisposing to renal disease and selected socio-demographic variables.

Table 6 : Association between the risk factors predisposing to renal disease with selected socio-demographic variables such as age, gender, level of education using semi-structured interview schedule.

(n=30)

Variables	Category			df	Chi-square value	P value
	Severe	Moderate	Mild			
Age in years						
20-30 yrs	0	1	0	1	0.2769	0.598
30-40 yrs	1	0	0			
40-50 yrs	1	3	1			
50-60 yrs	0	1	0			
>60yrs	3	16	3			
Gender						
Male	1	9	1	1	1.3801	0.24
Female	4	12	3			
Level of education						
Illiterate	2	6	1	1	0.5818	0.445
Up to higher secondary	3	14	3			
Graduation	1	0	0			
Occupational status						
Unemployed	3	13	3	1	0.114	0.73
Government employed	1	1	1			
Private firm	0	2	0			
Self employed	1	5	0			
Marital status						
Married	3	17	3	1	0.1622	0.687
Unmarried	1	0	0			
Widow	1	4	1			
Type of family						
Nuclear family	1	7	1	1	0.1236	0.725
Joint family	4	14	3			
Average monthly income						
<1000	3	5	1	1	1.2035	0.273
1000-5000	2	12	2			
5000-10000	4	0	0			
Above 10000	0	1	0			
Source of water						
Open well	2	13	4	1	1.1607	0.281
Bore well	3	8	0			
Type of latrine						
Indian	5	6	2	1	0.0639	0.8004
European	0	15	2			
Source of health information						
Health care provider	4	14	3	1	1.2035	0.272
Friends and neighbours	0	0	1			
Media including social media	1	6	0			
Others	0	1	0			

Table 6 shows there is no significant association between the risk factors predisposing to renal disease with selected socio-demographic variables such as age, gender, level of education, occupational status , marital status , type of family , average monthly income, source of water, type of latrine and source of information using semi-structured interview schedule (p value >0.05).

Table 7: Association between risk factors predisposing to renal disease and selected socio-demographic variable using checklist.

(n=30)

Variables	Category		df	Chi-square value	P value
	Moderate	Mild			
Age in years					
20-30 yrs	0	1	1	0.0639	0.8
30-40 yrs	1	0			
40-50 yrs	3	2			
50-60 yrs	1	0			
>60yrs	13	9			
Gender					
Male	8	3	1	0.484	0.486
Female	10	9			
Level of Education					
Illiterate	5	4	1	0.0431	0.835
Up to higher secondary	13	7			
Graduation	1	0			
Occupational status					
Unemployed	11	9	1	0.7031	0.401
Government employed	0	2			
Private firm	2	0			
Self employed	5	1			
Marital status					
Married	15	8	1	1.050	0.305
Unmarried	1	0			
Widow	2	4			
Type of family					
Nuclear family	8	1	1	2.916	0.087
Joint family	10	11			
Average monthly income					
<1000	5	2	1	0.0431	0.835
1000-5000	11	8			
5000-10000	2	1			
Above 10000	0	1			
Source of water					
Open well	10	9	1	0.4844	0.486
Bore well	8	3			
Type of latrine					
Indian	7	6	1	0.3619	0.547
European	11	6			
Source of Information					
Health care provider	12	9	1	0.043	0.835
Friends and neighbours	0	1			
Media including social media	5	2			
Others	1	0			

Table 7 shows there is no significant association between the risk factors predisposing to renal disease with selected socio-demographic variables such as age, gender, level of education, occupational status, marital status, type of family, average monthly income, source of water, type of latrine and source of information using check list (p value > 0.05).

DISCUSSION

The study result reveals that risk factor predisposing to renal disease with selected socio-demographic variables including age, gender, level of education, occupational status, marital status, type of family, average monthly income, source of water, type of latrine and source of information using semi-structured interview schedule and check list have no significant association. The study suggests that in screening of high risk individuals for renal disease and identification of risk is the best way to prevent emerging renal diseases.

CONCLUSION

The present study undertaken to assess the risk factors predisposing to renal diseases among patients in inpatient and outpatient department in nephrology and urology department of a selected hospital, Malappuram.

The important findings of the study are as follows:

- Seventy percentage of the patients have moderate risk factors, seventeen percentage of patient have severe risk factors and thirteen percentage patient have mild risk factors predisposing to renal diseases using semi-structured interview schedule.
- Sixty percentage of patients have moderate risk factors and forty percentage of patient have mild risk factors predisposing to renal diseases by using check list.
- There is no significant association between the risk factors predisposing to renal diseases with selected socio-demographic variables as the p value >0.05.

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REFERENCE

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