



A Study To Assess The Level Of Knowledge Regarding Modifiable Risk Factors Of Renal Calculi Among Adults In Selected Rural Area, Maharashtra With A View To Prepare An Informational Booklet.

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Abstract: Problem statement:A study to assess the level of knowledge regarding modifiable risk factors of renal calculi among adults in selected rural area, Maharashtra with a view to prepare an informational booklet.

Background of study:

Renal calculi one of the most painful urologic disorder. A large number of people are suffering from renal calculi problem all over the globe. Renal calculi, which are solid crystals that form dissolved minerals in urine, can be caused by both environmental and metabolic problems. Renal calculi are quite common and usually affect people who are between 30 and 60 years of age. They affect men more than women. In India there are various factors are responsible for formation of renal calculi it include Immobility and a sedentary lifestyle, which increases stasis. Living in stone-belt areas, High mineral content in drinking water, a diet high in purines, oxalates, calcium supplements, animal proteins, Urinary tract infections, dehydration , Prolonged indwelling catheterization, Neurogenic bladder, history of female genital mutilation ,obesity. Due to this some modifiable risk factors of renal calculi to prevent the occurrence of renal calculi in adults in selected rural area.

OBJECTIVES OF THE STUDY :

1. To assess the level of knowledge regarding modifiable risk factors of renal calculi among adults in selected rural area, Maharashtra.
2. To find out the association between level of knowledge regarding modifiable risk factors of renal calculi with sociodemographic variables in selected rural area, Maharashtra.
3. To prepare validate and distribute informational booklet, knowledge on modifiable risk factors of renal calculi among adults in selected rural area, Maharashtra.

ASSUMPTION:

- Adults may have knowledge regarding modifiable risk factors of renal calculi in rural area, Maharashtra.
- Information booklet may enhance the level of knowledge regarding modifiable risk factors of renal calculi among adults in rural area, Maharashtra

RESEARCH METHODOLOGY:

Research approach used was quantitative research approach. The descriptive research design was used to assess the level of knowledge regarding modifiable risk factors of renal calculi. The research setting selected for the study was a selected rural area, Maharashtra. 100 adults were selected from selected rural area, Maharashtra using simple random sampling technique. The tools were prepared for study it consists of 2 sections. Section A: Assessment of Socio demographic variables and section B the modified self structure knowledge questionnaires regarding modifiable risk factors of renal calculi. The data obtained were analyzed using descriptive and inferential statistics based on objectives and research questions.

Result:

According to level of knowledge regarding modifiable risk factors of renal calculi was assess by using self structure knowledge questionnaire. The results revealed that among 100 adults, none of them had inadequate knowledge of modifiable risk factors of renal calculi 5(5%), 74(74%) had a moderate adequate knowledge of modifiable risk factors of renal calculi and 21(21%) had adequate knowledge. The findings of the study reveals that there was a significant association between level of knowledge regarding modifiable risk factors of renal calculi with selected sociodemographic variables such as with age in year complete ($\chi^2=9.1484$) history of renal calculi ($\chi^2=5.294$), history of renal calculi in family ($\chi^2=5.307$) and source of

information ($\chi^2=7.803$) and there was no significant association between level of knowledge regarding modifiable risk factors of renal calculi with selected sociodemographic variables such as gender ($\chi^2=0.0152$), dietary pattern($\chi^2=1.194$), occupation ($\chi^2=1.552$), and source of drinking water ($\chi^2=3.3498$) at $p<0.05$ level of significance. Thus, it shows that there was a significant association between level of knowledge regarding modifiable risk factors of renal calculi with selected sociodemographic variables.

CONCLUSION:

The study findings shows that among 100 adults,(5%) had inadequate knowledge on modifiable risk factors of renal calculi,(74%) had a moderately adequate knowledge on modifiable risk factors of renal calculi and (21%) had adequate knowledge .Hence, study result conclude that renal calculi is major health issue in rural area , thus adults should have adequate knowledge regarding modifiable risk factors of renal calculi which helps to prevention of renal calculi

. Section A

Frequency and percentage wise distribution of the socio-demographic variables of adults. This section deals with data pertaining to the socio-demographic variables adults in selected rural area in terms of frequency and percentage. The data analyzed by using descriptive statistics.

Table 1: Frequency and percentage-wise distribution of adults in selected rural area by Age in years, Gender, Dietary pattern, Occupation, History of renal calculi, Source of drinking water and Source of information.

Sr. No	Socio Demographic Variables	Frequency	Percentage %
1	Age in years	20-25 years	16 16.00 %
		26-30 years	27 27.00 %
		31-35years	31 31.00 %
		36-40years	26 26.00 %
2	Gender	Male	41 41.00 %
		Female	59 59.00 %
3	Dietary pattern	Vegetarian	33 33.00 %
		Mixed Diet	67 67.00 %
4	Occupation	Sedentary worker	13 13.00 %
		Moderate worker	48 48.00 %

	Heavy worker	39	39.00 %
5	History of renal calculi	Yes	21 21.00 %
		No	79 79.00 %
6	History of renal calculi in Family	Yes	24 24.00 %
		No	76 76.00 %
Sr .No	Socio demographic variables	Freq	Perce ntage %
7	Source of drinking water	Bore well	47 47%
8	Source of information	River water	16 16%
		Municipality supply water	30 30%
		If Any other, specify	7 7%
		Mass Media	45 45%
		Health personnel	39 39%
	Peer group/ friends	8 8%	
	If Any other ,specify	8 8%	

Data presented in Table 1 shows that the distribution of adults in selected rural area by Age in years, Gender, Dietary pattern, Occupation, History of renal calculi, Source of drinking water, and Source of information.

Table 2: Frequency and percentage-wise distribution of adults in selected rural area according to Age in years. N=100

Sr .No	Socio Demographic Variables	Freqe ncy	Percent age %
1	Age in years 20-25 years	16	16.00%
	26-30 years	27	27.00%
	31-35 years	31	31.00%
	36-40 years	26	26.00%

Figure 3: Percentage-wise distribution of adults in selected rural area according to age in years.

Figure 3 according to table number 2 Percentage-wise distributions of adults in selected rural area according to age in years. The majority of 31 (31.00%) adults were in the age group 31-35years followed by 27 (27.00%) were in the age group of 26-30 years, 26(26.00%) were in the age group of 36-40 years and 16(16.00%) were in the age group of 20-25 years.

Table 3: Frequency and percentage-wise distribution of adults in selected rural area according to Gender.

N=100

Sr .No	Socio Demographic Variables		Frequency	Percentage %
1	Gender	Male	41	41.00%
		Female	59	59.00%

Figure 4: Percentage-wise distribution of adults in selected rural area according to Gender.

Figure 4 according to table number 3 reveals that Percentage wise distribution of adults in selected rural area according to Gender. The data reveals that 59 (59.00%) were female and the remaining 41(41.00%) were male.

Table 4: Frequency and percentage-wise distribution of adults in selected rural area according to Dietary pattern.

N=100

Sr .No	Socio Demographic Variables		Frequency	Percentage %
1	Dietary pattern	Vegetarian	33	33.00%
		Mixed Diet	67	67.00%

Figure 5: Percentage-wise distribution of adults in selected rural area according to their Dietary pattern.

Figure 5 according to table number 4 reveals that Percentage-wise distribution of adults in selected rural area according to their dietary pattern. Out of 100 adults 67(67.00%) were vegetarian diet and remaining 33(33%) were vegetarian diet.

Table 5: Frequency and percentage-wise distribution of adults in selected rural area according to occupation.

N=100

Sr .No	Socio Demographic Variables		Frequency	Percentage %
1	Occupation	Sedentary worker	13	13.00%
		Moderate worker	48	48.00%
		Heavy worker	39	39.00%

Figure 6: Percentage-wise distribution of adults in selected rural area according to their occupation.

Fig 6 according to table number 5 data reveals that's among 100 adult's rural area majority of 48 (48.00%) were moderate workers, 39(39.00%) were heavy workers and remaining 13(13.00%) were sedentary workers.

Table 6: Frequency and percentage-wise distribution of adults in selected rural area according to History of renal calculi.

N=100

Sr .No	Socio Demographic Variables		Frequency	Percentage %
1	History of renal calculi	Yes	21	21.00%
		No	79	79.00%

Figure 7: Percentage-wise distribution of adults according to their history of renal calculi.

Figure 7 according to table number 6 reveals that percentage-wise distribution of adults according to their history of renal calculi. Out of 100 adults', reveals that's 79(79.00%) have no history of renal calculi and remaining 21(21%) have history of renal calculi.

Table 7: Frequency and percentage-wise distribution of adults in selected rural area according to history of renal calculi in family.

N=100

Sr .No	Socio Demographic Variables	Frequency	Percentage %	
1	History of renal calculi in Family	Yes	24	24.00%
		No	76	76.00%

Figure 8: Percentage-wise distribution of adults selected rural area according to their history of renal calculi in family.

Fig 8 according to table number 7 reveals that percentage-wise distribution of adults' selected rural area according to their History of renal calculi in family. Out of 100 adults in selected rural area 76(76.00%) had no history of renal calculi, and 24(24.00%) were had history of renal calculi.

Table 8: Frequency and percentage-wise distribution of adults in selected rural area according to source of drinking water .

N=100

Sr .No	Socio Demographic Variables	Frequency	Percentage %	
1	Source of drinking water	Bore well	47	47%
		River water	16	16%
		Municipality supply water	30	30%
		If Any other, specify	7	7%

Figure 9: Percentage-wise distribution of adults in selected rural area according to their source of drinking water.

Figure 9 according to table number 8 reveals that percentage-wise distribution of adults in selected rural area according to their source of drinking water. The data reveals that 47(47%) were using bore well, 30(30%) were municipality supply water, 16 (16%) were river water and remaining 7(7%) were If any other.

Table9: Frequency and percentage-wise distribution of adults in selected rural area according to Source of information.

Sr .No	Socio Demographic Variables	Frequency	Percentage %
1	Source of information		
	Mass Media	45	45%
	Health personnel	39	39%
	Peer group/ friends	8	8%
	If Any other ,specify	8	8%

Figure 10: Percentage-wise distribution of adults according to their source of information.

Figure 10 according to table 9 reveals that percentage-wise distribution of adults according to their source of information. Out of 100 adults', reveals that's 45(45.00%) through mass media, 39(39%) through health personnel, 8 (8%) trough peer group/friends and remaining 8(8%) through if any other.

Table10: Classification of respondents according to level of knowledge on modifiable risk factors of renal calculi among adults.

N=100

Sr .No	Knowledge levels	Number	Percentage
1	Inadequate knowledge (Score 0-8 Marks)	5	5%
2	Moderately adequate knowledge (Score 9-16 Marks)	74	74%
3	Adequate knowledge (Score 17-24 marks)	21	21%

The above table depicts that among 100 adults, 5(5%) had inadequate knowledge on modifiable risk factors of renal calculi, 74(74%) had a moderately adequate knowledge on modifiable risk factors of renal calculi and 21(21%) had adequate knowledge.

Fig 11: Classification of adult's level of knowledge regarding modifiable risk factors of renal calculi.

Table 11: Mean, Median, SD, Range and Mean% of level of knowledge regarding Modifiable risk factors of renal calculi among adults.

N=100

Aspect	Max. Score	Mean	Median	SD	Range	Mean%
Knowledge	24	14.57	15	3.362	7-22	60.70%

(SD: Standard Deviation)

The above table depicts that maximum score were 24 ,Mean14.57, Median 15, standard deviation 3.362 , Range 7-22 and Mean percent were 60.70% of level of knowledge regarding modifiable risk factors of renal calculi among adults.

SECTION C

Table 12: Association between level of knowledge regarding modifiable risk factors of renal calculi with selected sociodemographic variables.

N=100

SN	Sociodemographic Variables	F Levels of knowledge			Chi square χ^2
		Median <15	Median ≥15		
1	Age in year				$\chi^2=9.1484$, p>0.05 df=3 S*
	20-25 years	16	5	11	
	26-30 years	26	6	20	
	31-35years	31	14	17	
	36-40years	27	16	11	
2	Gender				$\chi^2=0.0152$, p<0.05 , df=1, NS
	Male	41	17	24	

	Female	59	24	35	
3	Dietary pattern				
	Vegetarian	33	11	22	$\chi^2=1.194,$ $p<0.05,$ $df=1,$ NS
	Mixed Diet	67	30	37	
4	Occupation				
	Sedentary worker	13	6	7	$\chi^2=1.552,$ $p<0.05$ $df=2,$ NS
	Moderate worker	48	22	26	
	Heavy worker	39	13	26	
5	History of renal calculi				
	Yes(if yes duration)	21	4	17	$\chi^2=5.294,$ $p>0.05$ $df=1,$ S*
	No	79	37	42	
SN	Sociodemographic Variables	F	Levels of knowledge	Chi square	
			Median<15	Median ≥15	
6	History of renal calculi in Family				
	Yes(if yes duration)	24	5	19	$\chi^2=5.307,$ $p>0.05,$ $df=1$ S*
	No	76	36	40	
7	Source of drinking water				
	Bore well	47	21	26	$\chi^2=3.3498,$ $p<0.05,$ $df=3$ NS
	River water	16	5	11	
	Municipality supply water	30	14	16	

If Any other, specify	7	1	6	
8 Source of information				
Mass Media	45	25	20	$\chi^2=7.803,$ $p>0.05,$ $df=3$ S^*
Health personnel	39	10	29	
Peer group/ friends	8	3	5	
If Any other ,specify	8	3	5	

(NS: Not Significant, S*: Significant, df: degree of freedom)

The above table shows the associations between level of knowledge regarding modifiable risk factors of renal calculi with selected sociodemographic variables of adults. To associate the level of knowledge regarding modifiable risk factors of renal calculi with selected socio-demographic variables of adults the chi-square test has been used. The obtained chi-square value shows significant association between the level of knowledge regarding modifiable risk factors of renal calculi among adults ,with age in year (9.1484) of ($p>0.05$) history of renal calculi (5.294) of ($p>0.05$) history of renal calculi in family (5.307) of ($p>0.05$) and source of information (7.803) of ($p>0.05$). But the chi-square value did not show any significant association between level of knowledge regarding modifiable risk factors of renal calculi among adults and other socio-demographic variables such as gender , dietary pattern , occupation ,and source of drinking water.

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