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Effectiveness of structured teaching program (STP) on knowledge regarding determinants of renal failure among undergraduate students in selected graduated college at amravati, Maharashtra

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Abstract
"Effectiveness of structured teaching program (STP) on knowledge regarding determinants of renal failure among undergraduate students in selected graduate college at Amravati, Maharashtra."
Introduction: The saying "prevention is better than cure" has been around since the 13th or 17th century. It means that it's better to stop an illness from occurring than it is to treat it after it has happened. Prevention is better than cure" is a well-known proverb that emphasizes the importance of taking proactive steps to avoid problems or illnesses rather than waiting to address them once they have occurred. Understanding the risk factors or root causes of a problem is a crucial part of effective prevention. When you know what is causing a particular issue or disease, you can take targeted actions to reduce or eliminate those causes, thus reducing the risk of the problem occurring in the first place. To prevent a disease, it's not necessary to know everything about its natural history. Often, eliminating a single known essential cause is enough to prevent a disease. For example, exercising every day and having a balanced diet can help keep you healthy. The CDC defines three types of prevention: Primary prevention: Intervening before health effects occur, Secondary prevention: Screening to identify diseases in the earliest stages, Tertiary prevention: Managing disease post diagnosis to slow or stop. This is for informational purposes only. This information does not constitute medical advice or diagnosis [1].
Background of the study. An important global public health issue is renal failure. A change in the underlying pathogenicity of CKD may be to blame for the current disease burden. A few decades ago, glomerular nephritis was one of the main causes of kidney illness. At least in the western world, infections are no longer the primary cause of kidney disease [11]. The worldwide incidence of CKD has been reported in an increasing number of studies globally (the individual discussion of which is beyond the scope of this review), allowing for the aggregation of their results and the creation of data about global CKD prevalence in general, as well as in different patient subgroups and geographical areas. A 2010 study that examined the prevalence and burden of CKD combined the findings of 33 population based representative studies from around the world and found that 10.4% of men and 11.8% of women worldwide had CKD stages 1–5 by the age of 20. With a CKD age standardized prevalence of 8.6% and 9.6% in men and women, respectively, the study found significant disparities by geographic location defined by income level [2].

Keywords: Renal failure, undergraduate students

Introduction
Renal failure refers to the kidneys' inability to carry out their excretory duties, which causes the blood's nitrogenous waste products to be retained. There are two types of kidney failure: acute and chronic. Acute Renal Failure (ARF): Glomerular filtration reduces suddenly (over hours to days) and is typically reversible in ARF syndrome. The KDIGO criteria from 2012 state that AKI can be identified by any one of the following: a creatinine increases of 0.3 mg/dL in 48 hours, a rise in creatinine to 1.5 times baseline within the previous 7 days, or a decrease in urine volume of less than 0.5 mL/kg per hour for six hours.[3]Chronic Renal Failure (CRF): A persistent impairment of kidney function, also known as chronic renal failure (CRF) or chronic kidney disease (CKD), is indicated by either a computed glomerular filtration rate (GFR) less than 60 ml per minute / 1.73 m2 or an excessively increased blood creatinine for more than 3 months. Dialysis or kidney transplantation may be necessary as a result of the increasing loss of kidney function. End stage renal disease (ESRD) is the term used to describe a patient who requires renal replacement treatment [4].

Objectives
The objectives of study are
Primary Objective • To assess the effectiveness of Structured Teaching Programmed (STP) on knowledge regarding determinants of renal failure among undergraduate students. Secondary Objective: • To assess the pre-existing knowledge regarding determinants of renal failure among undergraduate students before intervention. • To evaluate the effectiveness of structured teaching program (STP) on knowledge regarding determinants of a renal failure among undergraduate students after intervention. • To find out the difference between the post-test knowledge score regarding determinants of a renal failure.

Materials and Methods
The study was undertaken to assess the knowledge of students regarding determinants of renal failure. A descriptive Evaluatory approach was used to collect data among 30 students drawn conveniently using inclusion and exclusion criteria. The following Assumption were made by

the investigator- o the undergraduate student will have some knowledge on undergraduate student o the demographic variables may influence the knowledge of undergraduate student regarding determinants of renal failure. The study was conducted in undergraduate college of Maharashtra state. The SAQ (Self administered questionnaire) were used to collect the data among undergraduate student. Accordingly, collected data were analyzed using descriptive and inferential statistics. The knowledge on determinants of renal failure among undergraduate student is 76.67%. Hence, Assumption: undergraduate student will have some knowledge on determinants of renal failure. There was no association of knowledge score with demographic variables among undergraduate student regarding determinants of renal failure.

Statistical Analysis

Results

Table 1: association of knowledge score in relation to demographic variables association of knowledge with demographic variables

Variable	Groups	Knowledge - Pre-Test		Chi Square	D.F.	p value	Significance
		Below Md	Above Md				
Age (in years)	18-20.	8	6	3.02	2	0.22	Not Significant
	20-21.	9	2				
	21-22	2	3				
	above 22	0	0				
Gender	Male	11	2	4.47	1	0.034	Significant
	Female	8	9				
Religion	Hindu	9	6	3.3	3	0.35	Not Significant
	Buddhist	8	2				
	Muslim	2	2				
	Others	0	1				
Monthly Income of family	Below 30,000	5	1	1.3	3	0.73	Not Significant
	30,000 to 60,000	7	5				
	60,000 to 1 Lakh	4	3				
	above 1 Lakh	3	2				
Any family History of renal failure	Yes	9	4	0.34	1	0.56	Not Significant
	No	10	7				
Do you have knowledge about renal failure?	Yes	7	5	0.215	1	0.64	Not Significant

Table 2: Significance of difference between knowledge score in relation to pre-test and post test score

Overall	Maximum score	Mean	Standard deviation	t-value	p-value
Pre-Test	30	11.70	2.71	20.32	0.00
Post Test	30	23.03	3.71		

The table shows that in the pre-test the mean of the knowledge score obtained by the sample was 11.70 and in the post test it raised to 23.03 and standard deviation 2.71 in pretest and 3.71 in posttest. When computed the data, calculated 't' value 20.32 is greater than table value 2.37 at 0.05 level of significance. Hence, the research hypothesis is accepted. It also concludes that the knowledge score of the sample shows marked improvement after giving self instructional module. This indicates that self instructional module is effective to improve the knowledge of the undergraduate students.

The table shows association of post test knowledge score in relation to demographic variables like age in (yrs), gender, monthly income, any family history of renal failure. The association was computed using one-way Chi square. The result revealed in the present study that there is no significant association between post test scores of nurses with their selected demographic variables.

Discussion

The present study was undertaken to assess the effectiveness of self-instructional module on knowledge regarding renal failure in selected hospitals. The study concluded that in pretest 36.67% had inadequate knowledge, 63.33% had moderate knowledge. whereas in post test score no one of them had inadequate knowledge, 76.67% moderate knowledge. It reveals that thepost test mean score percentage of knowledge regarding renal failure among the undergraduate students (23.03%) was higher than the pretest mean score percentage (11.70%). This difference was found to be significant. (t= 20.32***, p<0.05). Thus, it is considered that the self-instructional Module was effective to improve the knowledge scores among undergraduate students. The study also concluded that there was no significant difference of knowledge score and selected demographic variables such as age, gender, religion, monthly income and family history of renal failure because p value is >0.05.

Conclusion

After the detailed analysis, this study leads to the following conclusion. The undergraduate students do not have 100% knowledge regarding Renal failure. There was a significant increase in the knowledge of undergraduate students after the introduction of renal failure. Thus, it was concluded on renal failure was found effective as a teaching strategy. Demographic variables did not show a major role in influencing the pre-test and post test knowledge score among undergraduate students. Hence based on the above cited findings, it was concluded undoubtedly that the written prepared material by the investigator in the form of helped the undergraduate students to improve their knowledge on renal failure.

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