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EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON THE KNOWLEDGE ON LIFESTYLE MODIFICATION OF RENAL TRANSPLANT PATIENTS AMONG NURSES

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ABSTRACT

The Renal transplantation is considered the treatment of choice for patients with end-stage renal disease, offering significant improvements in survival and quality of life compared to dialysis. However, the success of kidney transplantation is heavily dependent on the recipient's adherence to post-transplant care, including lifestyle modifications.[1] These modifications encompass key areas such as diet, physical activity, medication adherence, and the management of psychological and social well-being. Despite their importance, non-adherence to these lifestyle changes remains a prevalent issue among renal transplant recipients and is a major contributor to poor health outcomes, including graft rejection, infection, cardiovascular complications, and premature graft loss. A study to assess the effectiveness of structured teaching program on the knowledge regarding lifestyle modification for renal transplant patients among nurses of selected hospital, Gurugram (Haryana). A Quantitative research approach and Pre-experimental research design was used for the study. The sample for the study was 60 Nurses working in Emergency, ICU, and Dialysis Unit of Med anta Hospital were selected using convenient sampling techniques. A self- administered questionnaire was used to assess knowledge of nurses regarding lifestyle modification before and after giving structured teaching program. The study revealed that out of 60 respondents, the mean pre-test knowledge score of the nurses was 10.77± 2.9 SD which increased to 17.82 ± 1.93 SD in the post-test and the difference in mean score was highly significant at $p<0.05$. In the pretest almost half of the participants having inadequate knowledge which increase more than half having moderately adequate knowledge in post-test. There was no significant association between post-test knowledge with demographic variables. The majority of the nurses were not much aware of lifestyle modification and this study showed the effectiveness of the structured teaching program. Hence, structured teaching program in a regular period will help in gaining knowledge among nurses. Effectiveness, Lifestyle modification, Nurses, Structured teaching program, Renal Transplant.

INTRODUCTION

End-stage renal disease (ESRD) is the final stage of chronic kidney disease, where kidney function falls below 10–15% of normal, necessitating renal replacement therapy such as dialysis or kidney transplantation to sustain life. Both treatment options serve the essential purpose of supporting patients whose kidneys can no longer perform vital functions, but they differ significantly in how they impact a patient's quality of life. Quality of life refers to an individual's overall well-being, encompassing physical health, psychological state, level of independence, social relationships, and interaction with the environment. In the context of ESRD and renal transplantation, quality of life becomes a critical aspect of treatment outcomes, influencing patient satisfaction, longevity, and psychological health.

Renal transplantation offers a new lease on life for patients with end-stage kidney disease. It not only improves physical health but also enhances emotional and social well-being. However, it requires a lifelong commitment to medical care and lifestyle changes. The success of renal transplantation depends on careful donor selection, skilled surgical intervention, comprehensive post-operative care, and the patient's commitment to adhering to treatment protocols. With advances in medical science and increased awareness of organ donation, the outcomes of kidney transplants continue to improve, providing hope to thousands of patients worldwide.

During the transplant surgery, perioperative nurses play a critical role in maintaining a sterile environment, monitoring vital signs, assisting the surgical team, and ensuring that proper protocols are followed to reduce the risk of infection and complications. In the post-operative phase, nurses closely monitor the recipient for signs of organ rejection, infection, or surgical complications, and manage immunosuppressive therapy by educating patients on the importance of adherence to medication schedules and recognizing adverse effects. [6]

Nurses also teach recipients about long-term self-care, including dietary restrictions, hygiene practices, and regular follow-up appointments, to maintain kidney function and overall health. Additionally, they provide support for living donors, ensuring they receive appropriate post-donation care and emotional support. Beyond clinical care, nurses play a key role in transplant coordination, helping to manage organ procurement logistics, facilitate communication between transplant centres and national registries, and ensure compliance with legal and ethical

standards. They are instrumental in fostering trust, cultural sensitivity, and respect in all patient interactions, often supporting patients from diverse backgrounds with complex needs.

METHODOLOGY

The present study aimed to assess to effectiveness of structured teaching program regarding improving knowledge on lifestyle modification of renal transplant patient among nurses at selected hospital, Gurugram (Haryana).A Quantitative research approach and Pre-experimental research design was used for the study. The sample for the study was 60 Nurses working in in Dialysis at Medanta Hospital were selected using convenient sampling techniques. A self- administered questionnaire was used to assess knowledge on lifestyle modification of renal transplant patient among nurses.

ANALYSIS

Subject's responses were coded and entered into SPSS (statistical package for social science program) version 20. Descriptive statistics was used to calculate the frequency and percentage distribution of subjects according to demographic variables, level of knowledge and Skills. In inferential statistics, Paired t-test test was used to compare the pre-test & post-test. Student t-test & One-way Anova was used to find association between knowledge with demographic variables.

RESULT

The demographic and professional profile of the 60 participants reflects a predominantly mid-career nursing workforce, with the majority (50%) aged 31–40 years and a considerable proportion (33.3%) younger professionals aged 21–30 years. The sample was female-dominated (60%), aligning with gender trends in nursing. Educationally, more than half (53.4%) held a B.Sc. Nursing degree, while the rest possessed GNM or Post Basic B.Sc., with no representation from postgraduate-level education. In terms of experience, a strong presence of seasoned professionals was evident, with 38.3% having over 10 years of clinical practice. Medical ward nurses formed the largest practice group (53.4%), though ICU and nephrology staff were also represented. Over half (55%) had direct experience with renal transplant patients, supported by 66.6% receiving renal nursing training. Additionally, 60% attended CNE or workshops on transplant care.

Section A: Distribution According to Demographic Variables

Table 1: Distribution According to Demographic Variables

(N=60)

Demographic Variables		Frequency	Percentage
Age			
	a) 21–30 years	20	33.3%
	b) 31–40 years	30	50.0%
	c) 41–50 years	10	16.7%
	d) Above 50 years	0	0%
Gender:			
	a) Male	24	40%
	b) Female	36	60%
	c) Transgender	0	0%
Educational Qualification:			
	a) General Nursing and Midwifery (GNM)	14	23.3%
	b) Post Basic B.Sc. Nursing	14	23.3%
	c) B.Sc. Nursing	32	53.4%
	d) M.Sc. Nursing or above	0	0%
Years of Clinical Experience			
	a) < 1 year	10	16.7%
	b) 1–5 years	9	15%
	c) 6–10 years	18	30%
	d) > 10 years	23	38.3%
Area of Work			
	a) ICU	14	23.3%
	b) Medical Ward	32	53.4%
	c) Nephrology Unit	14	23.3%
Have you cared for renal transplant patients			
	a) Yes	33	55%
	b) No	27	45%
Have you attended a CNE or workshop on transplant care			
	a) Yes	36	60%
	b) No	24	40%

SECTION – II: Description of Statistical Value of Pre-test and Post-test knowledge Scores Regarding lifestyle modifications Among Nurses

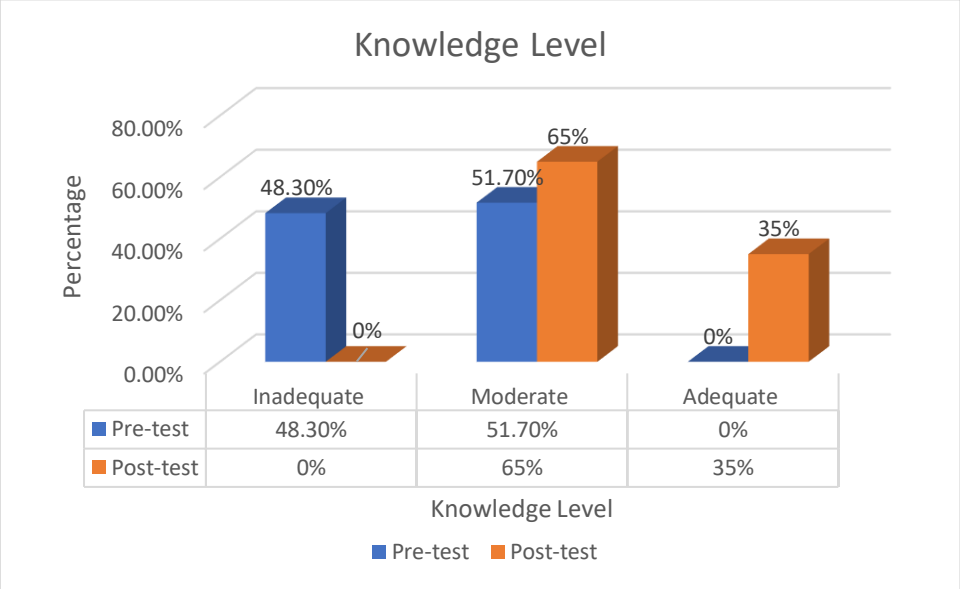
Table 2: Mean, standard deviation and 't' value of Pre-test and Post-test knowledge Scores Regarding lifestyle modifications Among Nurses. **(N=60)**

Sr. No	Knowledge	Mean	SD	't' value	Level of significance
1	Pre-test	10.77	2.9	11.87*	0.05*
2	Post-test	17.82	1.97		

***Level of significant**

Table 2 shows that the mean score of knowledge in pre-test was 10.77 and post-test was 17.82. The calculated 't' value 11.87 was greater than the table value at 0.05 level of significance. It reveals that there was a significant difference between the pre-test and post-test knowledge scores. So the results are concluded that structured teaching programme has a significant effect on improving the level of knowledge among nurses.

Distribution of subjects according to knowledge level.



Bar graph shows level of knowledge

The table shows the distribution of participants' knowledge levels in the pre-test and post-test. In the pre-test, 48.3% (29 participants) scored in the "inadequate" range (0-10), while 51.7% (31 participants) scored in the "moderate" range (11-15). No participants scored in the "adequate" range (15-20) in the pre-test. However, in the post-test, the results show improvement: 65% (39 participants) scored in the moderate range, and 35% (21 participants) achieved an adequate score. Notably, no participants scored in the inadequate range post-test, indicating a significant enhancement in knowledge following the intervention.

Section- III: To find association between post-test knowledge score and demographical variables of nurses.

Table- 3: To find association between post-test knowledge score and demographical variables of nurses.

(N=60)

Demographic Variable	N	Mean	SD	Calculated f -value	d-f	p Value
Age in year						
a) 21–30 years	20	15.100	1.61	1.288	2	0.284
b) 31–40 years	30	14.700	1.55			
c) 41–50 years	10	14.100	1.79			
Gender						
a) Male	24	15.208	1.58	3.568	1	0.064
b) Female	36	14.416	1.59			
Education						
a) General Nursing and Midwifery (GNM)	14	14.142	1.46	2.506	2	0.091
b) Post Basic B.Sc. Nursing	14	14.357	1.98			
c) B.Sc. Nursing	32	15.156	1.43			
Years of Clinical Experience:						
a) < 1 year	10	14.200	1.39			
b) 1–5 years	9	14.555	1.01	0.759	3	0.522
c) 6–10 years	18	14.666	1.70			
d) > 10 years	23	15.087	1.87			
Area of Work:						
a) ICU	14	14.142	1.46	2.506	2	0.091
b) Medical Ward	32	15.156	1.43			
c) Nephrology Unit	14	14.357	1.98			
Have you cared for renal transplant patients?						
a) Yes	33	14.484	1.54	1.737	1	0.193
b) No	27	15.037	1.69			
Have you attended a CNE or workshop on transplant care?						
a) Yes	36	14.416	1.59	3.568	1	0.064
b) No	24	15.208	1.58			

*** =Level of Significant** **$p \leq 0.05$**

No association between post-test knowledge score and demographical variables of nurses.

DISCUSSION

The first objective of the study was to assess the pre-test knowledge of nurses regarding lifestyle management of renal patients. The findings revealed that out of a maximum possible score of 20, the mean knowledge score was 11.77 ± 2.9 SD, which indicates only a moderate level of baseline understanding among the participants. This suggests that while nurses possessed some awareness of renal patient lifestyle management, significant gaps in knowledge existed. Similar observations were reported by Iqbal et al. (2018), who highlighted varying levels of awareness regarding chronic kidney disease (CKD) and transplant care across patients, caregivers, and the general public, reinforcing the need for structured education.

The second objective of the study was to evaluate the effectiveness of a structured teaching program on post-test knowledge. Results demonstrated a marked improvement, with mean knowledge scores rising from 10.77 in the pre-test to 17.82 in the post-test. The calculated 't' value (11.87) exceeded the table value at the 0.05 level of significance, confirming a statistically significant enhancement in knowledge. This finding clearly indicates that structured teaching interventions play a pivotal role in bridging knowledge gaps among nurses, thereby equipping them with better competence to manage renal patients.

The third objective was to identify associations between post-test knowledge and demographic variables. Analysis revealed no significant relationship between knowledge scores and demographic factors such as age, gender, or years of experience. This finding implies that the benefits of structured teaching were uniform across all subgroups, regardless of background characteristics. Similar insights were reflected in the work of Urstad et al. (2011), who emphasized that knowledge outcomes were more strongly influenced by targeted interventions than by demographic differences.

Overall, the study underscores the importance of structured educational programs in significantly enhancing nurses' knowledge of lifestyle management in renal patients, independent of demographic variations.

CONCLUSION

Out of 60 respondents, In the pretest, none of participants having adequate knowledge. In post-test, majority i.e (65%) had moderate adequate knowledge. The structured teaching program regarding was effective in improving the knowledge of the selected group of people. Hence,

with an increase in knowledge, there is a gradual increase in skill. There was no significant association between post-test knowledge regarding lifestyle modification with selected demographic variables. The investigator concluded that the majority of the nurses were not much aware regarding lifestyle modification and this study showed the effectiveness of the structured teaching program on lifestyle modification. Hence, training program in a regular period will help in gaining knowledge regarding lifestyle modification among nurses.

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