

KNOWLEDGE REGARDING POST-OPERATIVE CARE OF PATIENTS WITH KIDNEY TRANSPLANTATION AMONG NURSES IN PESHAWAR, PAKISTAN

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ABSTRACT

OBJECTIVES

Kidney transplantation is a surgical procedure and the best treatment choice for end-stage renal disease. This study aims to assess nurses' level of knowledge regarding post-operative care of patients with kidney transplantation.

METHODOLOGY

This descriptive cross-sectional was carried out in Hayatabad Medical Complex (HMC) and Rehman Medical Institute (RMI) Peshawar from February 2019 to May 2019. These are tertiary care hospitals; the former is a public sector hospital while the latter is a private sector hospital. A convenient sampling technique was followed and included 109 participants. Data were collected using a structured questionnaire of 25 items related to the care of post-renal transplantation on a Likert Scale. Frequencies and percentages were calculated for demographic variables. The Mean and standard deviation were calculated for knowledge among nurses. A Chi square test was applied to find an association between demographic variables and level of knowledge. Data were analyzed with SPSS 20.

RESULTS

Of the total number of participants 109, 23 (26.6%) were females, and 77 (73.3%) were male. The mean score of knowledge was 11.59 ± 3.391 out of 25. Of the participants, 62 (56.9%) fell into the poor score, and the average score was awarded by 44 (40.4%), while 3 participants (2.8%) scored good knowledge.

CONCLUSION

The nurses demonstrate poor knowledge regarding post-operative care of patients with kidney transplantation. Education and experience play an essential role in enhancing the education of nursing staff working in kidney transplantation units. Formal training needs to be imparted to provide quality care to renal transplantation patients.

KEYWORDS: Knowledge, Nurses, Post-transplant Care, Education

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INTRODUCTION

The World Health Organization (WHO) reported in 2017 that there was 90306 kidney transplant, of which 32990 (36.5%) were living donor and 57316 (63.5%) were cadaveric kidney transplant.¹ The previous research has shown that chronic kidney disease (CKD) is one of the major health concerns globally with the rise in the prevalence of diabetes mellitus and blood pressure, and it has been estimated that nearly 434.3 million people have it in the East, with most of the burden observed in China and India.² Furthermore, literature argue that one out of 10 individual is suffering from CKD. The highest and lowest were documented in Pakistan (21.1%) and India (10.2%).³ It has been estimated that there is an incidence of more than 100 new cases in Pakistan.⁴ In order to provide treatment to these patients, 180 dialysis facilities and 30 renal transplant units are operating across the country.⁵ Renal Transplantation was started in 1979 at the Armed Forces Institute of Urology (AFIU), and they have performed 100 renal transplants at the end of 1985.⁶ The researchers have widely acknowledged that transplantation is a time of profound uncertainty for the patient when undergoing renal transplantation involves much health proportion. Still, the nurses are at the center of care delivery.⁷ The researchers have proven that it is not only the organ supply that causes the underutilization of transplants but the poor attitude, lack of knowledge, and various other sociodemographic factors are also involved.⁸ Keeping in view the crucial of nurses in post-transplant care, their knowledge at an adequate level is essential. This requirement is even more critical in the developing world, where the health care system is already weak. In light of the significance of knowledge among nurses, the objective of this study is to assess the level of knowledge among nurses regarding post-transplant care.

METHODOLOGY

This descriptive cross-sectional study was carried out at the Institute of Kidney Diseases of Hayatabad Medical Complex and Rahman Medical Institution Peshawar, Pakistan, for 04 months, from February 2019 to May 2019. The ethical approval was granted by the Institute of Nursing Sciences at Khyber Medical University Peshawar. The sample size of the study was 109 Nurses, an online Raosoft Sample Size Calculator. For sample size calculation, the margin of error was considered, the confidence interval was 95% calculated, and the population was 151 nurses. A convenient sampling technique was utilized for the selection of participants. Informed consent was obtained from the study participants after completely explaining the purpose of data collection. A self-administered questionnaire was used for data collection pilot study was conducted on the 10% of the sample size. The Cronbach's alpha of 0.77 was obtained to check the reliability of the questionnaire. The questionnaire consisted of 25-items and two sections. The first section represented the demographic data, while the second section consisted of the questions regarding renal transplantation. Every question option contained four options, one correct and 03 incorrect options. The answers to the questions were considered correct and incorrect. Frequencies and percentages were calculated for demographic variables. The level of knowledge was assessed by obtaining a score on the scale of "Good knowledge," representing a score of ≥ 70 , "Average Knowledge representing 50-70%, while < 50 was considered "Poor knowledge." Chi-Squared was calculated for comparison among the demographic variables. SPSS 26 was utilized for data analysis.

RESULTS

A total sample consisted of 109 staff nurses, females were 80 (73%), and males were 29 (26%). The age of 62 % of the participants was between 61% were 23-30 years and 8% of the participants were > 37 years old. Majority of the participants (54.1%, $n = 59$) had 3 years diploma, 42% ($n=46$) had BSN while 3.7% ($n=4$) had MSN. Most than half of the participants (50.5%, $n = 55$) had a clinical experience from 4 to 6 years, 13% ($n=15$) had experience from 1 to 3 years, 15% ($n = 17$) had 7-0 years, and 20% ($n = 22$) had more than ten years of clinical nursing experience. The possible level of knowledge of participants scored from 0 to 25. The mean score for all participants was

11.59±3.391 (Max=21, Min= 3). Of the sample, 62 (56.9%) of the participants obtained poor scores: 44 (40.4%) participants showed an average result, and 3(2.8%) revealed good knowledge. The chi-square test of a demographic variable with a level of knowledge showed significance with qualification (0.05) and training status (0.045).

Table 1: Demographic Data

Gender	Frequency	%Age
M	23	26.6%
F	77	73.3%
Marital Status		
Unmarried	56	61.5%
Married	53	31.2%
Previous Training of Transplant		
Yes	17	15.6%
No	92	84.4%
Age		
23-30	67	61.5%
30-37	34	31.2%
>37	8	7.3%
Education Status		
3 years diploma	59	54.1%
BSN	46	44.2%
MSN	4	3.7%
Designation		
Staff Nurse	76	76%
Head Nurse	21	21%
Supervisor	2	2%
Manager	1	1%
Experience		
1-3	15	15%
4-6	46	46%
7-10	17	17%
>10	22	22%

Table No 2: Knowledge about Post-Operative Care of the Patients with Kidney Transplantation

Responses of Participants	F(%)
Indications of renal transplant	82 (18)
Contraindications of renal transplant	16 (84)
Knowledge to change the post-operative dressing.	69 (31)
CKD Patient for kidney transplant.	25 (75)
Sign of rejection among renal transplant patients.	34 (66)
Important preparation for a renal transplant patient.	69 (31)
Knowledge about the more successful donation	36 (64)
Immediate post-operative assessment for the recipient	56 (44)
Normal range of CVP after renal transplant	28 (72)
The target of BP in the early postoperative period	61 (39)
Warning sign regarding urine output	54 (46)
Indications of hemodialysis	62 (38)
Knowledge about fluid replacement	16 (84)
Most essential medicine after transplantation	44 (56)
Precautions for post-operatively infection	69 (31)
Signs and symptoms of acute rejection	52 (58)
Immediate complication of post kidney transplantation	31 (69)
Lack of knowledge about contraindicated factors	43 (59)
Vital signs monitoring after transplant	43 (59)
Urine output monitoring after transplant	54 (46)
Electrolyte monitoring on the first day	30 (70)
Sedation of patient after transplant	22 (78)
Action after severe fluid overload	68 (32)
Techniques required for the patient to prevent infection	30 (70)
Knowledge to educate the family members	53 (47)

Table 3: Level of Knowledge among Nurses

	Key	F	%Age	Mean Score
≥70%	Good knowledge	3	2.8%	11.59±3.391
50-69%	Average Knowledge	44	40.4%	
<50%	Poor Knowledge	62	56.9%	

Table 4: Association of Demographic Variables with a Level of Knowledge

		Good	Average	Poor	P-Value
Gender	Male	1	15	13	0.148
	Female	2	29	49	
Age	23-30	2	23	42	0.263
	30-37	1	17	16	
	> 37	0	4	4	
Marital Status	Unmarried	2	23	31	0.650
	Married	1	21	31	
Qualification	Diploma	2	18	39	0.05
	BSN	1	23	22	
	MSN	0	3	1	
Designation	Staff Nurse	2	31	50	0.093
	Head Nurse	1	10	12	
	Supervisor	0	2	0	
	Manager	0	1	0	
Experience	1-3 years	1	4	10	0.482
	4-6 Years	2	20	33	
	7-10 Years	0	9	8	
	>10 years	0	11	11	
Training Status	Yes	0	12	5	0.045
	No	3	32	57	

DISCUSSION

This study was conducted to assess the knowledge of nurses regarding post-operative renal care. The mean score of knowledge among nurses revealed 11.59 out of 25. The previous finding of research supported the current findings where only 1 (6.7%) participant showed an adequate knowledge regarding post-operative care of patients with kidney transplantation among staff nurses. The previous study was conducted in India with the somewhat same health care facilities as our country. So it is concluded that our health care systems require the appropriate interventions to enhance the patients of renal transplant care.⁹ In contradiction, a study conducted in Nigeria reported majority (62.8%) of the nursing staff had fair, while 29.5% of participants had poor knowledge regarding post-operative nursing care of kidney transplantation^{10,11,12} The differences in findings with the current results may reflect the

disparity in the level of education internationally. It might be possible that there is a practice of continuing nursing knowledge in the context of Nigeria. In Pakistan, training programs for nurses are not traditionally imparted, which results in poor knowledge, while in many countries, specialized training programs are conducted in the nursing discipline. In addition, in the current study, 69% of participants marked correct answers regarding the isolation and aseptic techniques that the nurses should follow during post-operative renal patients. Similarly, the previous literature also reported the same results that 69% of nursing staff answered the correct answer regarding the isolation and the need for aseptic techniques for post-operative patients of kidney transplantation.^{13,14,15} So, it is a positive point that nurses have knowledge regarding isolation which is very important in the care of renal transplantation. Moreover, the results of the current study showed a significant positive association between the level of education and nurses' knowledge regarding post-operative care of kidney transplant patients. A previous study has found this result has established that with a higher proportion of baccalaureate nurses, the patient mortality decreases.¹⁶ In contradiction, the previous literature proved insignificant findings and established that the level of education does not affect the nurses and the safety of patients.¹⁷ Likewise, the previous study also reported a strong positive association between nurses' knowledge regarding transplantation and nurses' education. Similarly, there is a significant association between a training session and knowledge. The previous literature has established that exposure to the specific program resulted in a greater level of knowledge. Individuals with no college education were found to have a more negative attitude towards post-transplant care. The literature showed that training programs could increase self confidence, knowledge, critical thinking, and communication skills.¹⁸ In the light of the literature, it can be concluded that specific previous training regarding the transplant will provide a positive platform for the nurse to care for patients in an efficient way.

CONCLUSION

Overall, the nurses had very poor knowledge regarding post-operative care of patients with kidney transplantation in aspects of infection, kidney transplantation indication, blood pressure monitoring, fluids intake, isolation, and diet. Education and training play an important role in enhancing the education of nursing staff working in

kidney transplantation units. All health institutions need to arrange training sessions for the nurses to enhance their performance at work.

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