



ASSESSMENT OF EFFECTIVENESS OF SELF MANAGEMENT GUIDELINES ON THERAPEUTIC COMPLIANCE AND ANXIETY AMONG RENAL TRANSPLANT RECIPIENTS: A QUASI EXPERIMENTAL STUDY

Nursing

Thakur P*	Msc Nursing, National Institute of Nursing Education, PGIMER, Chandigarh, India *Corresponding Author
Shruti	Lecturer, National Institute of Nursing Education, PGIMER, Chandigarh, India
Dhandpani M	Lecturer, National Institute of Nursing Education, PGIMER, Chandigarh, India
Kenwer B D	Associate Professor, Department of Renal Transplant Surgery, PGIMER, Chandigarh, India

ABSTRACT

Renal transplant is the best treatment of choice for end stage renal disease but also leads to changes in life roles in most areas of kidney transplant recipients lives. Goal of the current study was to evaluate the effectiveness of "self management guidelines" on therapeutic compliance and anxiety in renal transplant recipient. A quasi-experimental design was used in the study. Total 60 samples were taken (30 in each control and experimental group) by total enumeration sampling. Self management guide lines were developed and taught to the experimental group and only routine care was given to the control group. Interview schedule and observation method was used for assessment of outcome variables. Results showed that experiment group exhibit good adherence with therapeutic compliance checklist where as in control group average adherence was seen. Median anxiety score was found highly significant in experiment group as compared to control group (p value <0.001). In the present study self-management guidelines for renal transplant recipient were found to be effective in terms of increasing post transplant therapeutic compliance and decreased anxiety.

KEYWORDS

End stage renal disease, renal transplantation, renal transplant recipients, Self-management guidelines

INTRODUCTION

As CKD progress it leads to ESRD which is the fifth stage of CKD, and is defined as kidney functions less than 10 percent of normal function and glomerular filtration rate less than 15 milliliters per minute. Dialysis and kidney transplantation are the treatments of choice for ESRD and provide a means of prolonging patient's life span and maintaining quality of life but also leads to changes in life roles in most areas of kidney transplant recipients lives. Global Observatory on donation and transplantation data of 2015 showed that there was increase of 5.8% over year 2014 in total organ transplantation. There were total 84,347 kidney transplants, carried out in 45 countries².

According to 2015 report of Global Burden of Disease Study, kidney disease was ranked as 12th most common cause of death and it accounts for 1.1 million deaths all over the world. Over the last 10 years overall mortality of CKD has increased by 31.7% and making it one of the fastest rising major causes of death³.

According to report of Scientific Registry of Transplant Recipients (SRTR) 7% of kidney transplant failed within a year and 17% of people lost their transplants within 3 years. Over 20% of kidney transplants are re-transplanted every year.

Incidence of rejection after renal transplant is decreased due to progress in immunosuppressive drugs therapy but despite recent improvements in short term outcome, long-term survival remains unchanged and improving these is a challenge. Kidney transplantation leads to changes in life roles in the most areas of kidney transplant recipients lives. They have to manage lifelong treatment and medical follow-up and are at greater risk of infections, cardiovascular disease, diabetes and certain type of cancers. To improve long-term post-transplant outcomes among kidney transplant recipients, self management therefore should be a top most priority⁴.

Gordon et al. (2005) have suggested that patient's role should be considered in managing aspects of transplantation in daily life when developing long-term strategies. They suggested that patient engagement and self-management activities may be vital in limiting the decline of graft function, thus shifting from a pure molecular perspective to a behavioral level.⁵ So self-management is important aspect for renal transplant and the investigator thought to develop nurse initiated "Self Management Guidelines" for patients undergoing renal transplant by demonstration, return demonstration and health education method to prevent the post transplant complications and early identification of warning signs of complications

MATERIALS AND METHODS

A quantitative approach with quasi experimental study design was used in the present study. Total enumeration sampling was used to draw sample. All patients undergoing Kidney transplant during July to December 2018 were enrolled in the study. The total sample size was 60 (30 in each control and experimental group). Patients were enrolled at time of admission. An interviewing questionnaire was developed after reviewing related literature, which consist of demographic profile sheet, Personal profile sheet and Clinical profile sheet, Hamilton Anxiety Rating Scale (HAM-A) and checklist for assessment of adherence with self management guidelines.

Post transplant self management guidelines were developed and taught to the patients in the experiment group. These guidelines includes information about kidneys basic structure and function, post transplant complications and prevention from infection, surgical wound care, taking regular anti-rejection medication, diet in kidney transplant, reduction of anxiety and stress of patient, when to report immediately, regular follow up, daily monitoring and maintaining of self temperature chart, blood pressure chart and intake output chart. These guidelines were taught to patients by health education and return demonstration was taken from the patients. One supplemental booklet containing colored pictures of these guidelines was also given to the patients. Recall of these guidelines was done till third post transplant day. Assessment of outcome variables was done before renal transplant and on 1st, 2nd, 3rd, 5th, 7th day of post renal transplant and at 2nd week and 1 month after transplant

ETHICAL ASPECTS

Approval of research protocol was sought from the Institute's Ethics Review Committee of PGIMER Chandigarh. This research study was conducted in Renal Transplant ICU, PGIMER, Chandigarh.

DATA COLLECTION

Table 1: Socio demographic profile of the study participants of control and experimental group.

Variable	Control Group (n1=30 f(%))	Experiment group (n2=30 f(%))	χ^2 value (df) p value
Age (years)*	18(60)	11(37)	4.34(3) 0.20\$
18-33	10(33)	13(43)	
34-49	02(7)	04(13)	
50-65	--	02(7)	
66 and above			

Gender	27(90)	21(70)	3.75(1)0.05
Male	03(10)	09(30)	
Female			
Qualification	01(3.3)	--	6.98(4)0.09\$
Uneducated	01(3.3)	03(10)	
Middle school	05(17)	05(17)	
High School	05(17)	12(40)	
Intermediate / post high	18(60)	10(33)	
Graduation and above			
Marital status	18 (60)	22 (73)	1.20(1)0.27
Unmarried	12 (40)	08 (27)	
Married			
Type of Family	16 (53)	18 (60)	0.27(1)0.60
Nuclear	14 (47)	12 (40)	
Joint			

Age* (Mean $\pm$ SD, range)

Control group = 34.03 $\pm$ 10.32, 20-54

Experiment group = 37.7 $\pm$ 12.92, 21-71

\$=Fisher exact test

Figure 1: Line diagram showing comparison of median therapeutic compliance score among study participants in control and experimental group

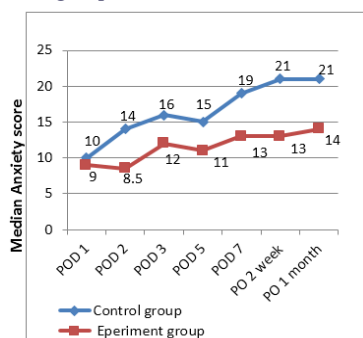


Table 2: Comparison of anxiety score of patients of control and experimental group.

Variables	Control group (n1=30)	Experimental group (n2=30)	U value p value
	Median IQR	Median IQR	
Pre transplant anxiety score.	21 24.2-16.7	20 24-16	U=380 p=0.30
Post transplant anxiety score	09 12-07	03 05-02	U=52 p<0.001
U value P value	U= 63 p<0.001	U= 0.5 p= <0.001	

(*) Statistically significant at $p < 0.05$

(HAM-A Maximum anxiety score=56; <17 indicates mild severity, 18-24 mild to moderate severity and 25-30 moderate to severe).

RESULT

Results showed that the mean age of the patients in experimental group was 37.7 $\pm$ 12.92 years with range 21-71 years and in control group mean age of study patients was 34.03 $\pm$ 10.32 years with range 20-54 years. Both groups were comparable as per age (p value>0.05). More than half of the study patients in both groups were male i.e. experimental group 70% and 94% in control group. In experimental group 40% of patients were educated up to post high school and 60% of patient in control group had graduation and above. Majority of patients in experimental group and control group were unmarried. Majority of patients in both groups were living in nuclear families. Both groups were homogenous and comparable as per qualification, marital status, type of family and habitat of the study participants (p value>0.05).

Median therapeutic compliances scores of control group on preoperative day 1 was 9 (IQR=9.25-8) which was increased to 14 (IQR=15-12) at 1 month. In experiment group median therapeutic

compliance score on preoperative day 1 was 10 (IQR=11-9) and increased to 21 (IQR=21-19) at 1 month. Hence, it can be inferred that the patients in experiment group had better therapeutic compliance from postoperative day 1 to post operative 1 month.

Median anxiety score with in the control group was decreased from 21 (IQR=24.2-16.7) to 09 (IQR=12-7) in pre and post transplant period respectively with p value <0.001. In experimental group median anxiety score was decreased from 20 (IQR=24-16) to 03 (IQR=5-2) during pre and post transplant period respectively with p value <0.001. There was no statistically significant decrease in pre transplant anxiety score between control and experiment group (p value>0.05). But there was statistically significant decrease was found in post transplant anxiety score between control and experiment group (p<0.001). Hence, in post transplant period both the groups had significant decrease in anxiety score i.e. patients in both group were in mild anxiety. However, reported median anxiety score was found highly significant in experiment group as compared to experiment group.

DISCUSSION

Renal transplant is the blessing of science for human population and a life changing procedure for patients with end stage renal disease (ESRD). The survival rate of the patients with ESRD has improved a lot after the renal transplant surgeries. Although renal transplant is becoming very common in twenty first century but in the absence of proper care and self management there are many complications associated with it. Nursing personnel have important role during all stages of renal transplant from preoperative phase to post operative phase till discharge and on post transplant follow-ups. Therefore, they are a important member of the multi disciplinary team involved in the procedure of the renal transplant and care. A complete nursing intervention initiated since renal transplant till the regular follow up of the patient can successfully reduce complications, improves therapeutic compliance and can improve the quality of their lives. The aim of the present study was two-folded the first was to develop and implement "Self management guidelines" for renal transplant recipients and other was to evaluate the effectiveness of "Self management guidelines" on therapeutic compliance and anxiety. The "Self management guidelines" were taught to the patients in experimental group with health education along with Regular follow-up of patients in control and experimental group was done at different post operative days (Day 1, Day 2, Day3, Day 5, Day 7, 2nd week, and at 1 month after renal transplant).

In present study, most of study participants in control group were in age group of 18-33 years (60%) and in experimental group, most of study participants were in age group of 34 to 49 years (43%). Yoseria Attia Ameen Omar in her study also found majority of study patients were between age 8 to 54 years with a mean 35.4 years⁶. In relation to gender the present study showed that, majority of the study participants were male i.e 70% in experimental group and 94% from control group were male. This finding is in agreement with that of Kunitoshi Isek who reported women seems to be somewhat protected from developing ESRD and the cumulative incidence of ESRD remain slow in female during the reproductive ages and begins to rise 10 years later in women than in men⁷.

Present study showed that median therapeutic compliance score was higher in experiment group i.e. POD 1 median score is 10 and (IQR=11- 09) and one month median score is 21 and (IQR= 21-19) as compared to control group in post operative days. This suggests that self-management guidelines helped patients in improving the therapeutic compliance in experiment group. Similar study by Tim Mathes et al supports the findings of present study that adherence enhancing interventions (AEI) in kidney transplantation recipients can increase adherence in post transplant period⁸. This suggests that self-management guidelines helped patients in improving the therapeutic compliance in experiment group.

Present study showed that there was highly significant reduction in anxiety score (p<0.001) of study participants in experimental group from pre to post transplant period respectively as compared to control group. This showed that decrease anxiety in post transplant period is may be by virtue of "Self management guide lines administered to patients in experiment group. Similar reporting was done by Chandrasekaran Aravind in which he reported that delivery of proper information and quality care in post transplant period reduced the anxiety and re admission of patient to hospital⁹.

CONCLUSION:

Thus the current study focuses that a systemic teaching and practices based information related to renal transplant care can reduce the chances of occurrence of post transplant complications, and can improves knowledge regarding self management and also reduce the anxiety related to transplant and allow the patient to adapt more easily to changed life roles.

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