



Research Article

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EFFECTIVENESS OF EDUCATIONAL INTERVENTION ON KNOWLEDGE AND QUALITY OF LIFE AMONG HEMODIALYSIS PATIENTS

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Received on: 05/07/16 Revised on: 23/08/16 Accepted on: 03/09/16

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DOI: 10.7897/2277-4343.075205

ABSTRACT

Chronic renal failure is a devastating medical, social and economic problems for patients and their families in India. Dialysis is considered the treatment of choice. The aim of the study is to find out the effectiveness of educational intervention on knowledge and quality of life among hemodialysis patients at Chennai. A true experimental group design was used and allotted 60 samples in control group and 60 in experimental group. The experimental group received the educational intervention and the control group received the hospital routine. The pretest and posttest level of knowledge and quality of life was assessed by Knowledge questionnaire and Kidney disease Quality of life(KDQOL -SF). The post test mean score of knowledge was 11.40 in control group and 17.83 in experimental group with the t value of 10.29 which denotes high statistical significance at p<0.001. The posttest mean score of Quality of Life was 0.38 in control group and 10.10 in experimental group with the t value of 84.35 at p<0.01 which showed high statistical significance. Hence educational intervention is recommended to the hemodialysis patients to increase the level of knowledge and promote the Quality of life.

Keywords: QOL, Hemodialysis, Knowledge, Educational Intervention

INTRODUCTION

Health is wealth is a old saying, which is realized by people who has chronic kidney disease today. As their wealth is reduced by treating the disease throughout their life time. The restrictions in food and fluid impose lot of stress and affects their quality of life. Chronic kidney disease (CKD) is an irreversible and progressive kidney disease¹ globally, 10% of the population were affected by CKD and millions of them die each year because they could not afford the treatment.² Haemodialysis has been proved to be the effective treatment modality, as it results in long survival rates and maintains patients' life at a satisfactory level.³

Haemodialysis results in a marked change in the quality of life, due to number of modifications and restrictions, which affect patients psychological and physiological wellbeing.⁴ Haemodialysis patient experiences modifications and changes in marital role, financial concerns, changes in social relationships, frequent hospitalizations, limitations in vacations, limitations in leisure activities, increased dependency on the artificial kidney machine, the medical staff and family environment, uncertainty about the future, sleep disturbances, physical fatigue, sexual problems, limitation in physical activities, unemployment, changes in body appearance and restriction of food and fluid^{5,6} which affect patients.⁷

Improvement in patient knowledge has frequently been described as a primary outcome in randomized clinical trials in evaluating kidney disease patient education programme⁸ This was supported by the study of Shah⁹ who reported that quality of life of Chronic renal failure patients undergoing hemodialysis was influenced by their level of Knowledge.

Mittal¹⁰ et al, reported that the CKD patient experiences psychosocial burden because of the need for dialysis includes

time commitment, increased dependence on family members, anxiety, and feeling tired or depressed after treatment. Many factors contribute to the cognitive or mental aspects of quality of life and should be considered during the assessment of overall quality of life.

Statement of the problem

A true experimental study to evaluate the effectiveness of educational intervention on Knowledge and Quality of life among hemodialysis patients at selected settings, Chennai.

Objective

The objective of the study is to find out the effectiveness of educational intervention on knowledge and quality of life among hemodialysis patients.

MATERIALS AND METHODS

The true experimental design was used to conduct the study among hemodialysis patients in TANKER foundations, Chennai. Totally 120 hemodialysis patients, were allotted 60 each in experimental and control group by probability simple random sampling technique.

The hemodialysis patients were selected by the lottery method to control group and experimental group. As patients were coming for hemodialysis two times a week, the days were selected for both groups. Those who were coming on Monday and Wednesday morning were selected for experimental group and Tuesday, Wednesday noon were selected for control group. The samples included in the study were who fulfilled the inclusion criteria with aged 20- 70 years; speaks English or Tamil and receives Hemodialysis treatment two times a week. Samples who had paralysis, CKD patient experiences cognitive impairment and hearing impairment were excluded from the study.

After obtaining formal permission from the setting, the patients were informed the purpose of the study and informed consent was obtained. After collecting the demographic data the pretest level of Knowledge and Quality of life among hemodialysis patients in experimental and control group was assessed using knowledge questionnaire and Kidney disease Quality of life(KDQOL -SF).After the pretest the experimental group received an educational intervention, once for 35-45 minutes of power point presentation on hemodialysis with discussion. The education focused on what is hemodialysis, the causes of CKD, risk factors, investigations, treatment, care of fistula , diet modifications, importance of fluid restrictions and management of complications were discussed and their doubts were clarified.

The patients assured that they understood the hemodialysis care and will follow it. For reinforcement, a booklet on Hemodialysis was provided to all patients in experimental group. The control group followed the hospital routine. At the end of fourth week, the posttest level of knowledge and quality of life among experimental and control group was assessed by the same tool. After the posttest, the educational intervention was provided to the control group and reinforced with the booklet.

Ethical consideration: The study was conducted after obtaining the written approval from the Institutional Human Ethics Committee of Saveetha University (002/11/2013/IEC/SU; dated 15 November 2013).

Table 1: Comparison of pretest and post test knowledge score in Experimental and control group

Group	Pretest		Posttest		Mean difference	Student Paired t-test
	Mean	SD	Mean	SD		
Experiment	10.63	4.38	17.83	1.94	7.20	t=10.29, P=0.001***, DF=59, significant
Control	10.50	4.18	11.40	4.43	0.90	t=1.82, P=0.08, DF=59 not significant

N = 60

Table 2: Identification of influencing factors for Knowledge gain using univariate analysis (Exp)

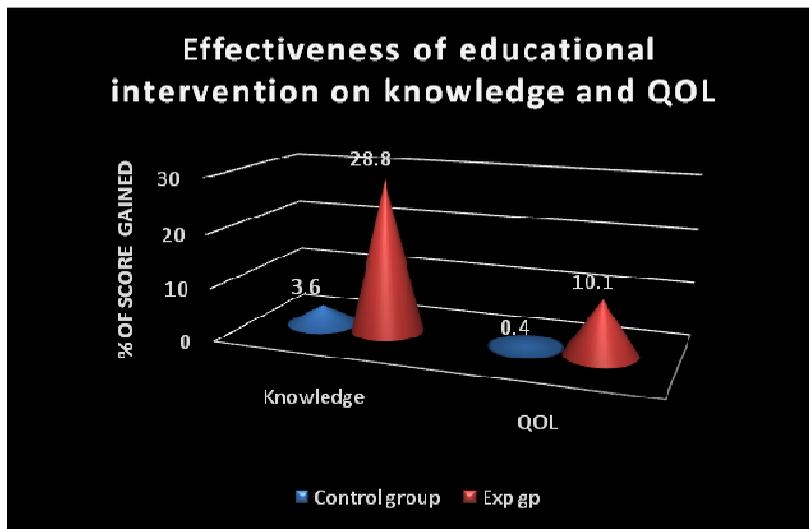
Variable		Level of knowledge gain				Total	Chi square test	OR(95%CI)
		Below average (<7.20)		Above average (>7.20)				
		n	%	N	%			
Age	< 50 years	26	63.4%	15	36.6%	41	$\chi^2=9.32$ P=0.02* S	6.5(1.6-28.6)
	> 50 years	4	21.1%	15	78.9%			
Gender	Male	27	61.4%	17	38.6%	44	$\chi^2=8.52$ P=0.01** S	6.9(1.5-36.0)
	Female	3	18.8%	13	81.3%			
Residence	Rural	18	66.7%	9	33.3%	27	$\chi^2=5.45$ P=0.02* S	3.5(1.1-11.8)
	Urban	12	36.4%	21	63.6%			
Smoking	Yes	10	76.9%	3	23.1%	13	$\chi^2=4.81$ P=0.03* S	4.5(1.0-23.9)
	No	20	42.5%	27	57.5%			
Previous knowledge	Yes	4	44.4%	5	55.6%	9	$\chi^2=6.41$ P=0.01** S	10.5(1.2-24.2)
	No	26	51.0%	25	49.0%			
Years of treatment	< 2 years	18	72.0%	7	28.0%	25	$\chi^2=8.30$ P=0.01** S	4.9(1.4-17.7)
	3 -5 years	12	34.3%	23	65.7%			

Table 3: Comparison of pretest and post test QOL score

Group	Pretest		Posttest		Mean difference	Student paired t-test
	Mean	SD	Mean	SD		
Experiment	50.76	8.75	60.86	8.66	10.10	t=84.35, P=0.001*** DF=59, significant
Control	51.18	4.34	51.56	4.02	0.38	t=1.91, P=0.06 DF=59, not significant

Table 4: Pre and post test correlation between Knowledge and QOL in Expl. Group

	Mean ± SD	Karl Pearson correlation coefficient
Pre test Knowledge	10.50±4.18	r=0.18, p=0.25, not significant
QOL	51.18±4.34	
Post test Knowledge	15.83±1.94	r=0.49, p=0.001*** significant
QOL	60.85±8.66	



RESULTS

The analysis of Student paired t test was done to assess and compare the level of Knowledge within experimental and control group revealed that the level of knowledge was same in experimental and control group at the baseline. Table 1 shows there was a significant ($p < 0.001$) difference between the pre test (10.63 ± 4.38) and post test (17.83 ± 1.94) level of Knowledge in experimental group observed after administration of Educational Intervention. There is no significant difference between pretest (10.50 ± 4.18) and posttest (11.40 ± 4.43) level of Knowledge in the control group.

Table 2 shows the influencing factors for knowledge improvement among experimental group using univariate analysis showed that >50 years, female gender, urban, non smoking, previous knowledge exposure and 3-5 years of treatment patients were gained adequate knowledge. Unadjusted odds ratio was given with 95% confidence interval.

Table 3 shows the analysis of Student paired t test was done to assess and compare the level of QOL within experimental and control group revealed that the level of QOL was same in experimental and control group at the baseline. Table 3 shows there was a high statistical significant ($p < 0.001$) difference between the pre test (50.76 ± 8.75) and post test (60.86 ± 8.66) level of QOL in experimental group observed after administration of Educational Intervention. There is no significant difference between pretest (51.18 ± 4.34) and post test (51.56 ± 4.02) level of QOL in the control group.

Table 4 shows the correlation between the pre test and post test level of knowledge and QOL in experimental group by using Karl pearson correlation coefficient. The correlation obtained between the pre test knowledge and QOL was non significant, $r = 0.18$, $p = 0.25$ in experimental group and in the post test it was moderately correlated $r = 0.49$, $p = 0.001$ which means as knowledge increases their QOL also increases moderately.

DISCUSSION

In this study majority of the CKD patients in experimental group were belonged to age group of 41-55 years and above and mostly were unemployed. This study finding was supported by Sabouhi, et al⁶ and Tsay and Chen¹¹ reported that the mean age and prevalence of CKD was higher among 50 years and above

aged patients. The study participants in both group reported that hypertension was the main causative factor for CKD which was consistent with the study finding conducted by Henrique et al.¹² and also consistent with the result of the study conducted by Tsay¹³ who found that diabetes and hypertension were the major etiologies for CKD.

CONCLUSION

Educational intervention was effective in improving the level of knowledge and promotes the quality of life especially physical and psychological well being of CKD patients. This was supported by Yusop Md¹⁴ reported that along with educational intervention other alternative therapeutic intervention has to be planned to promote the quality of life.

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Cite this article as:

C. Uma, S.Vijayalakshmi. Effectiveness of educational intervention on knowledge and quality of life among hemodialysis patients. *Int. J. Res. Ayurveda Pharm.* Sep - Oct 2016;7(5):109-112 <http://dx.doi.org/10.7897/2277-4343.075205>

Source of support: Nil, Conflict of interest: None Declared

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