IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e- ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 7, Issue 4 Ver. V (Jul.-Aug. 2018), PP 24-27
www.iosrjournals.org

"Evaluate the Effectiveness of Self-Instructional Module on Knowledge Regarding Intradialytic Stretching Exercises among Hem dialysis Patients in Selected Hospitals Udaipur, Rajasthan"

Mr. Shankar Singh[1], Mr. Aakash Chavda[2], Mr. Sandeepkumar N[3]
([1]M.Sc. Nursing, Geetanjali College of Nursing Udaipur,
Geetanjali university Udaipur, Rajasthan, India.)
([2]Associate professor & HOD of Medical Surgical Nursing, Geetanjali College of Nursing Udaipur,
Geetanjali university Udaipur, Rajasthan, India.)
([3]Asst. professor Dept. of Medical Surgical Nursing, Geetanjali College of Nursing Udaipur, Geetanjali university Udaipur, Rajasthan, India.)
Corresponding author: Mr. Shankar Singh

***Abstract**: A quasi experimental One group pre-test post-test study to evaluate the effectiveness of self-instructional module on knowledge regarding intradialytic stretching exercises among hemodialysis patients in selected hospitals Udaipur, Rajasthan by using purposive sampling technique method. The tool comprised of by using structured knowledge questionnaire. The pretest was conducted and the Self Instructional Module was administered. The post-test was conducted after one week .The data obtained were analyzed by using differential and inferential statistics. the mean post-test knowledge score is 26.03 (81.34 Percent) is greater than the mean pre-test knowledge scores 13.03 (40.71 Percent). The enhancement in the knowledge level of respondents is 13 indicates gain in knowledge by respondents.*

***Key words** – One group pre-test post-test pre experimental study, Intradialytic stretching exercises, hemodialysis patients.*

Date of Submission: 21-07-2018 Date of acceptance: 04-08-2018

I. Introduction

Kidneys - the vital organ plays a main role in the maintenance of homeostasis mechanism in human body.[1] Healthy kidneys are the sophisticated reprocessing machine that cleans the blood by removing fluid, salt and wastes from the body. Deficit in blood supply to the kidney will lead to decreased function. Prolonged decrease in the blood supply or in the blood pressure will lead to acute or sudden kidney failure.[2] Renal failure is characterized by progressive destruction of renal mass with irreversible sclerosis and loss of nephrons over a period of at least few months to years, depending upon the underlying etiology. Renal failure is classified into two; they are acute and chronic renal failure. Acute Renal Failure (ARF) is a rapid decrease in kidney function leading to collection of metabolic wastes in the body. When the Glomerular Filtration Rate (GFR) decrease Blood Urea Nitrogen (BUN) level increases, waste products build up in the blood causing uremia and azotemia. This acute syndrome may be reversible with prompt intervention. ARF may lead to Chronic Renal Failure (CRF).[3]Hemodialysis is a life saving measure for patients with chronic kidney disease. It is an ongoing process where patients experience complications such as hypotension, muscle cramps, disequilibrium syndrome and nausea during the procedure. Chronic kidney disease (CKD) has been increasingly recognized as a global health burden. Individuals with CKD are at risk for progressive loss of kidney function and kidney failure. One of the most common treatments for kidney failure is haemodialysis. Worldwide statistics shows that 9, 20,000 people are undergoing hemodialysis per day, which constitutes about 7-8% of the total population. C.G.Okwuonu et al (2015) mentioned that 2010 global ranking of premature causes of death show that kidney diseases moved up from position 32 in 1990 to position 24 in 2010[4]. It is estimated that 33% to 86% of patients receiving hemodialysis have experienced muscle cramps. Since cramps are a common intradialytic event, the discomfort leads to premature termination of the treatment, noncompliance with the prescription and therefore under dialysis. Thus interfering with the muscle cramps and even preventing the occurrence become a major responsibility of the patients. Since nurses are taking care of hemodialysis patients almost everywhere, it becomes predominantly the nurse role[5]. Muscle cramps are a common discomfort experienced by patients undergoing hemodialysis which is characterized by a sudden, painful, involuntary contraction of a muscle originates from the peripheral nerves. The most commonly affected muscles are the gastrocnemius (calf muscles), triceps (the muscles in the upper arms), the hamstrings (the muscles behind the thighs), and the quadriceps (the muscles in front of the thighs)[6.]Stretching is a form of physical exercise in which a specific

muscle or tendon (or muscle group) is deliberately flexed or stretching in order to improve the muscles and achieve comfortable muscle tone .the result is the feeling of increased muscle control, flexibility, and range of motion. Stretching is also used therapeutically to alleviate cramps.[7]

II. Research Elaborations

Statement of problem -

"Evaluate the effectiveness of self-instructional module on knowledge regarding intradialytic stretching exercises among hemodialysis patients in selected hospitals Udaipur, Rajasthan."

III. Objectives

1. To assess the knowledge score regarding intradialytic stretching exercises among hemodialysis patients.
2. To evaluate the effectiveness of self-instructional module on knowledge regarding intra dialytic stretching exercises among hemodialysis patients.
3. To find out the association between pre-test knowledge score with selected socio-demographic variables.

IV. Hypothesis

H_1- There is a significant difference between pre-test and post-test knowledge score regarding intradialytic stretching exercises among hemodialysis patients.

H_2- There is significant association between pre-test knowledge score with selected socio-demographic variables.

V. Materials And Methods

Population – Hemodialysis patients
Sample- Hemodialysis patients in different hospitals at Udaipur City.
Sample Size – 110 Hemodialysis Patients.
Setting – Geetanjali Medical college and hospital & Pacific Medical college and hospital , Udaipur Rajasthan, IndiaThe conceptual framework for the present study is based on Who's system Model

VI. Research Design

The research design selected for the present study was a one group pre-test post-test research design

PRE-TEST (Dependent variable)	TREATMENT (Independent variable)	POST-TEST (Dependent variable)
RO_1	X	RO_2
Knowledge of hemodialysis patients	Self -Instructional module	Knowledge of hemodialysis patients

Table 1 : Pre- experimental one group pre test and post test research design

The interpretations of the symbol are as below:
RO_1 = Assessment of knowledge by pre-test.
X = Self Instructional Module on knowledge regarding intradialytic stretching exercises among hemodialysis patients.
RO_2 = Assessment of knowledge by post-test.

Ethical Consideration

After obtaining permission from research committee of Geetanjali College of Nursing, prior permission was obtained from medical superintendent of Pacific medical college and Hospital & Geetanjali medical college and Hospital Udaipur Rajasthan, India. Consent was taken from each participant who had participated in the study.

Description of the Tool
The structured knowledge questionnaire consisted of two parts i.e. Part – I & II .
Part I: Consist of selected socio-demographic variables like age in years, gender, habitat, educational qualification, duration of dialysis therapy, source of information regarding renal failure, attended any health education programme regarding renal failure. This section consists of 07 items.

Part II: Consist of structured knowledge questionnaire regarding intradialytic stretching exercises among hemodialysis patients. This section consists of 32 items on selected aspects. The selected aspects are:
Introduction regarding kidney (03)

Renal Failure (03)
Dialysis (05)
Muscle cramps (06)
Intradialytic stretching exercises (15)

Data Collection And Data Analysis
The data was presented under the following sections
Section I: Description of socio-demographic variables of Respondents.
Section II: Findings related to area wise knowledge scores of respondents intradialytic stretching exercises among hemodialysis patients.
Section III: Findings related to association between pre-test knowledge score with selected socio-demographic variables of hemodialysis patients.

VII. Results

Table 2: Area wise pre-test knowledge score of respondents regarding intradialytic stretching exercise.

N=120

Area	Maximum Score	Mean	Mean Percentage	Standard Deviation
Introduction of kidney	03	1.72	57.33	0.72
Renal failure	03	1.48	49.33	0.62
Dialysis	05	1.98	39.67	1.37
Muscle cramps	06	2.43	40.42	0.89
Intradialytic stretching exercises	15	5.43	36.17	2.67
Total	32	13.04	40.71	4.18

Table-2 showed that in pre-test the maximum mean percentage obtained by the respondents was 57.33% with SD of 0.72 in the aspect of introduction of kidney, 49.33% with SD of 0.62 in the aspect of Renal failure, 40.42% with SD of 0.89 in the aspect of muscle cramps, 39.67% with 1.37 in the aspect of dialysis, 36.17% with 2.67 in the aspect of intradialytic stretching exercises.

Table 3: Area wise post-test knowledge score of respondents regarding intradialytic stretching exercise.

N=120

Area	Maximum Score	Mean	Mean Percentage	Standard Deviation
Introduction of kidney	03	2.16	71.34	0.39
Renal failure	03	2.16	71.34	0.39
Dialysis	05	3.98	79.50	0.38
Muscle cramps	06	4.88	81.39	0.49
Intradialytic stretching exercises	15	12.85	85.67	1.05
Total	32	26.03	81.34	1.42

Table-3 showed that in post-test the maximum mean percentage obtained by the respondents was 85.67% with SD of 1.05 in the aspect of intradialytic stretching exercises, 81.39% with 0.49 in the aspect of muscle cramps, 79.50% with SD of 0.38 in the aspect of dialysis, 71.34% with 0.37 in the aspect of renal failure, 71.34% with SD of 0.39 in the aspect of introduction of kidney.

Table - 4 : Distribution of respondents by the level of knowledge regarding intradialytic stretching exercise.

N=120

	Score	Frequency		Percentage	
		Pre Test	Post test	Pre test	Post Test
Inadequate knowledge (0-50%)	0-16	114	0	95	0
Moderately knowledge (51-75%)	17-23	6	115	5	95.83
Adequate knowledge (76-100%)	24-32	0	5	0	4.17
Total	**32**	**120**	**120**	**100**	**100**

Table-4 showed that the pre-test and post-test knowledge level of hemodialysis patients regarding intradialytic stretching exercises. The result shows that in pre-test none of the respondents had adequate knowledge, 5% had moderately knowledge, and 95% had inadequate knowledge and in post-test 4.17% had adequate knowledge, 95.83% had moderately knowledge and 0% of the respondent had inadequate knowledge regarding use of self-instructional module on intradialytic stretching exercises among hemodialysis patients.

Table 5: Effectiveness of self-instructional module on knowledge regarding intradialytic stretching exercises among hemodialysis Patients. N=120

Knowledge Score	Mean	Mean Percentage	SD	Enhance-ment	Enhancement Percentage %	Df	Z Value	Inference (p=0.05)
Pre-test	13.03	40.71	4.18	13	40.63	119	32.42	S
Post-test	26.03	81.34	1.42					

S = Significant

Table-5: showed that the mean post-test knowledge score was 26.03 (81.34%) was greater than the mean pre-test knowledge score 13.03 (40.71%). The above table also depicted that the enhancement in the knowledge of respondents is 13 (40.63%) supporting the post-test knowledge score was higher than the pre-test knowledge score. The data further represent that the 'z' value of 32.42 was significantly higher than the table value 1.96 at 0.05 level significance. This indicates that there was difference in pre-test and post-test knowledge score of respondents and self -instructional module is effective in improving the knowledge score of hemodialysis patients on intradialytic stretching exercises.

H_1: There is a significant difference between the pre and post-test knowledge score of hemodialysis patients on use of self-instructional module on intradialytic stretching exercises. Hypothesis was tested at 0.05 levels. The calculated 'z' value 32.42 was significantly higher than the table value 1.96 at 0.05 level of significance. This indicates that there was significant difference between pre-test and post-test knowledge score, hence the hypothesis H_1 was accepted.

H_2: There is a significant association between pre-test knowledge score with selected socio demographic variables.

There was significant association between pre-test knowledge score with socio demographic variables such as duration of dialysis therapy $\chi 2 = 13.54$ and source of information $\chi 2 = 6.57$ were significant at 0.05% level and there were no significant association between pre-test knowledge score with socio- demographic variables such as age in year $\chi 2 = 3.96$, gender $\chi 2 = 0$, habitat $\chi 2 = 5.31$, education qualification $\chi 2 = 1.48$, attended any health education programme $\chi 2 = 0.25$ at 0.05% level. Hence, research hypotheses H2 was accepted.

VIII. Conclusion

The overall comparison of pre and post-test knowledge scores knowledge regarding intradialytic stretching exercises among hemodialysis patients shows that the mean post-test knowledge score was 26.03 (81.34 Percent) is greater than the mean pre-test knowledge scores 13.03 (40.71 Percent). The enhancement in the knowledge level of respondents is 13 indicates gain in knowledge by respondents. The data further represent that the z value of 32.42 was significantly higher than the table value 1.96 at 0.05 level of significance. This indicates that there was significant difference in pre-test and post-test knowledge score of respondents and that the self- instructional module was effective in improving the knowledge level of hemodialysis patients on intradialytic stretching exercises.

Reference

[1]. Ross Willson. Textbook of Anatomy and physiology.11th ed. New Delhi : Elsevier publication; 2000.
[2]. Brunner,Suddarth. Textbook of medical surgical nursing, 10th ed. Philadelphia : Lippincott publication ; 2002.
[3]. Lewis M. Textbook of medical surgical nursing, 6th ed. Philadelphia: Mosby publication ; 2014.
[4]. Abali C, Adejumo O, Chukwuonve I, Ogahs O, Okwuonu CG. Awareness level of kidney functions and diseases among adults. J Ame Sci 2015;25:158-163.
[5]. Judith Z. Review of hemodialysis for nurses and dialysis personnel. 8th ed. USA : Elsevier Mosby ; 2012.
[6]. Brenner. Exercise performance by hemodialysis patients. J Bas Clin Ren Sci. 37: 84-96.
[7]. Lekha J, Abraham E J, G Malarvizhi et al. Effectiveness of intradialytic stretching exercise on prevention and reduction of muscle cramps among patients undergoing hemodialysis .J Nur Hea Sci. 2017April;6(2):47-5

Mr. Shankar Singh . "Evaluate the Effectiveness of Self-Instructional Module on Knowledge Regarding Intradialytic Stretching Exercises among Hemodialysis Patients in Selected Hospitals Udaipur, Rajasthan India". IOSR Journal of Nursing and Health Science (IOSR-JNHS) , vol. 7, no.4 , 2018, pp. 24-27.