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RESEARCH ARTICLE

EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON PRACTICE OF DIABETIC FOOT CARE AMONG DIABETIC PATIENTS RECEIVING INSULIN THERAPY

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ABSTRACT

A study was conducted "to evaluate the effectiveness of Video Assisted Teaching (VAT) on Practice of Diabetic Foot Care among diabetic patients receiving Insulin Therapy in selected Health Centers, Puducherry". The objective of the study were to assess the existing and post test level of Practice regarding Diabetic Foot Care among the diabetic patients receiving Insulin Therapy, to evaluate the effectiveness of Video Assisted Teaching on Practice of Diabetic Foot Care among the diabetic patients receiving Insulin Therapy, to associate the post test level of Diabetic Foot Care Practices with selected demographic variables.A total of 100 samples were selected and grouped by simple random sampling and data were collected by using Structured Foot Care Practice Checklist. The post test practice scores in the experimental and control group was 7.90 ± 1.11 and 5.52 ± 1.75 respectively. The calculated t- value is significant at p<0.001 level. So the VAT on Diabetic Foot Care Practices was found to be effective.

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INTRODUCTION

One of the greatest challenges faced by the modern world is Diabetes mellitus. The physical, social and economic factors involved in the management of diabetes are the continuous strain for the health care sector and the government agencies. As per WHO statistics, 171 million people were suffered with diabetes mellitus in the year of 2000 and it have been increased to 422 million cases in 2016 globally. India had 41 million individuals with diabetes in the year of 2000 and it was increased to 69.2 million cases in 2015. This estimate would likely to be increased at the rate of 101.2 million in the year 2030. Though, diabetes is a non-communicable disease it affects a large number of people due to changes in the life style (fast food, adopting western lifestyle, sedentary lifestyle, alcohol, smoking, lack of exercise and poor dietary pattern). The World Health Organization had provided prime importance to Diabetes Mellitus and introduced the theme "Halt the rise and beat diabetes" in the world health day, 2016. This goal will only be achieved by creating awareness regarding self-care practices and life style modification among diabetic patients. Diabetes has potential long term complications that can affect the kidneys, eyes, heart, blood vessels and nerves. Amongthese Foot ulcers are much feared complications of diabetes and recent studies have suggested that the risk of developing foot ulcer is as high as 25% globally. In India prevalence of foot ulcers among diabetes patients is 3%.

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Statement of the problem: A quasi experimental study to evaluate the effectiveness of Video Assisted Teaching on Practice of Diabetic Foot Care among Diabetic patients receiving Insulin Therapy in selected Health Centers, Puducherry.

Objectives of the Study

- To assess the existing level of Practice regarding Diabetic Foot Care among the diabetic patients receiving Insulin Therapy in experimental and control group.
- To assess the post test level of Practice regarding Diabetic Foot Care among the diabetic patients receiving Insulin Therapy in experimental and control group.
- To evaluate the effectiveness of Video Assisted Teaching on Practice of Diabetic Foot Care among the diabetic patients receiving Insulin Therapy.
- To associate the post test level of Diabetic Foot Care Practices with selected demographic variables in the experimental group.

Hypotheses

H_1: There will be significant difference between pre and post test level of Practice regarding Diabetic Foot Care among the diabetic patients in the experimental group.

H_2: There will be significant Association between post test level of Practice regarding Diabetic Foot Care with the selected demographic variables.

Inclusion Criteria

Diabetic patients;

- Both male and female.
- Those who are willing to participate in the study.
- Those who can able to understand Tamil or English language.

Exclusion criteria

Diabetic patients those who;

- Are on oral hypoglycemic agents.
- Already had training on Diabetic Foot Care.

Description of tool

Section- A: Demographic & Clinical variables such as Age, Sex, Religion, Education, Occupation, Income, Type of family, Family history of Diabetes, Duration of diabetes& Duration of Insulin Therapy.

Section- B: It consists of checklist which has 11 questions regarding Diabetic Foot Care Practices

MATERIALS AND METHODS:

The present study was conducted to evaluate the effectiveness of Video Assisted Teaching on Diabetic Foot Care Practices. The study design was quasi experimental research design (Pre-test and post-test with control group). A total of 100 patients who met the inclusion criteria were selected by using simple random sampling technique. After getting formal written permission from the concerned authorities the researcher was given a brief introduction about the procedure and purpose of the study and obtained oral and written consent from each sample. The data collection was carried out daily as two session morning and evening when they came to receive Insulin Therapy. During first two weeks, the data collection was carried out in first two Health Centers for the Experimental group, pre interventional data were collected by using structured checklistfor 15 minutes per sample. All the selected samples were seated comfortably and Video Assisted Teaching with demonstration regarding Diabetic Foot Care was given for 30 minutes. Post test was conducted on the eighth day to assess the level of Diabetic Foot Care Practices by using same checklist. During third and fourth weeks, the data collection was carried out in next two Health Centers for the Control group, pre interventional data were collected and the post test was conducted on eighth day following pre test. For the Control group Video Assisted Teaching with demonstration was given after the Post test.

Data analysis and interpretation

DISCUSSION

The first objective was to assess the existing level of Practice regarding Diabetic Foot Care among the diabetic patients receiving Insulin Therapy: The result exhibited that in the experimental group, 37 (74%) had poor Practice, 13(26%) had moderate Practice and none of them had adequate Practice.whereas in the control group, 25(50%) had poor Practice, 25(50%) had moderate Practice and none of them had adequate Practice regarding Diabetic Foot Care.

The second objective was to assess the post test level of Practice regarding Diabetic Foot Care among the diabetic patients receiving Insulin Therapy: The results showed that in the experimental group, 16(32%) had adequate Practice, 34(68%) had moderate Practice and none of them had poor Practice.whereas in the control group, 24(48%) had poor Practice, 26(52%) had moderate Practice and none of them had adequate Practice regarding Diabetic Foot Care.

The third objective wasto evaluate the effectiveness of Video Assisted Teaching on Practice of Diabetic Foot Care among the diabetic patients receiving Insulin Therapy: The comparison of post test Practice score between the experimental and control group, the mean score of Practice in the experimental group was 7.90 ± 1.11 and in the control group the mean score was 5.52 ± 1.75. The calculated unpaired 't' value of $t = 8.110$ was found to be statistically significant at $p<0.001$ level.

This clearly indicates that Video Assisted Teaching on Practice of Diabetic Foot Care which was administered to the diabetic patients in the experimental group was found to be effective in increasing the level of Practice in the post test.

Hypothesis (H1): From the above results it is clear that there was significant difference between the pre and post test level of Practice regarding Diabetic Foot Careamong the diabetic patients in the experimental group was accepted. Hence the research hypothesis H1 is accepted.

The fourth objective was to associate the post test level of Diabetic Foot Care Practices with selected demographic variables: The study analysis result reveals that in the Practice ofDiabetic Foot Care, the demographic variables Education and Duration of Illnesswere alone had shown statistically significant association with the post test level of Practice regarding Diabetic Foot Care among diabetic patients at $p<0.001$ level and other demographic variables had not shown statistically significant association with post test level of Practice regarding Diabetic Foot Care among diabetic patients in the experimental group.

Hypothesis (H3): From the above results it is clear that there was a significant association between Practice of Diabetic Foot Care with Education and Duration of Illness. Hence H3 is accepted in terms of Education and Duration of Illness as Demographic variables.

Conclusion

Prevention of complications is the major challenge in diabetic management. Improper foot care is the prime reason for loss of limb, increased dependency and poor quality of life among Diabetic patients.

The study result showed that Video Assisted Teaching was effective in improving the Practice of Diabetic Foot Care. This is also a convenient measure. So, the Video Assisted Teaching can be administered as an adjunct therapy by nurses in their day to day care of their patients in Hospital setting.

Table 1. Frequency and percentage distribution of demographic variables of diabetic clients in the experimental and control group

Demographic Variables	Sub Variables	Experimental Group		Control Group	
		f	%	f	%
Age	<50 years	23	46	13	26
	51 – 60 years	17	34	23	46
	Above 60 years	10	20	14	28
Sex	Male	23	46	22	44
	Female	27	54	28	56
Religion	Hindu	44	88	49	98
	Muslim	5	10	0	0
	Christian	1	2	1	2
Education	Upto primary	29	58	25	50
	Primary to higher secondary	20	40	22	44
	College	1	2	3	6
Occupation	Unemployed / Housewife	29	58	29	58
	Labourer	16	32	13	26
	Skilled	5	10	6	12
	Professional	0	0	2	4
Income	Less than 5000	34	68	34	68
	5001 – 10000	15	30	8	16
	More than 10000	1	2	8	16
Type of family	Nuclear	33	66	35	70
	Joint	17	34	15	30
Family history of diabetes	Yes	27	54	25	50
	No	23	46	25	50
	Not known	0	0	0	0
Duration of illness	Less than 5 years	19	38	21	42
	5 - 10 years	18	36	15	30
	10 - 15 years	0	0	3	6
	More than 15 years	13	26	11	22
Duration of Insulin Therapy	Less than 5 years	37	74	43	86
	5 - 10 years	9	18	4	8
	10 - 15 years	1	2	0	0
	More than 15 years	3	6	3	6

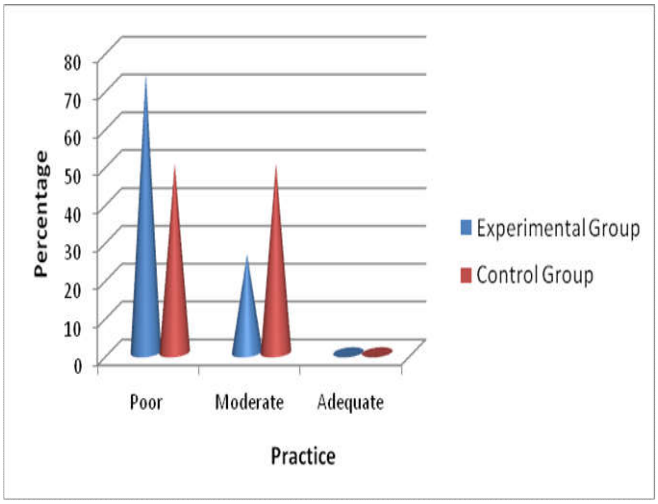

Fig. 4.2.1 Percentage distribution of existing level of Practice regarding Diabetic Foot Care among the diabetic patients in the experimental and control group

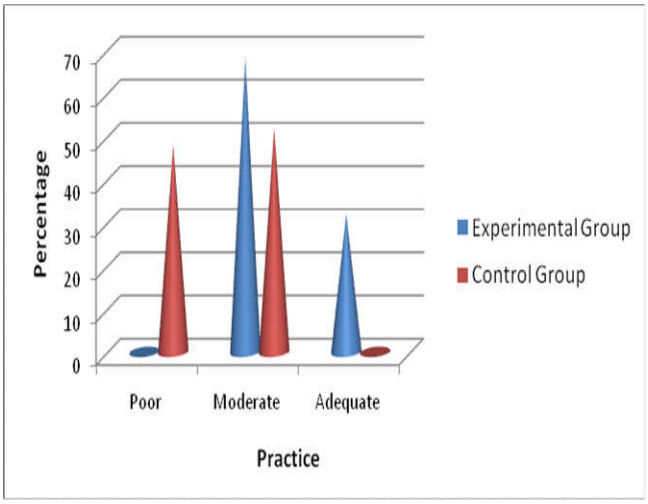

Fig.4.2.2 Percentage distribution of post test level of Practice regarding Diabetic Foot Care among the diabetic patients in the experimental and control group

Table 4.3.3: Comparison of post test Practice score regarding Diabetic Foot Care among the diabetic patients between the experimental and control group.

N = 100(50+50)

Practice	Mean	S.D	Unpaired 't' Value
Experimental Group	7.90	1.11	t = 8.110
Control Group	5.52	1.75	p = 0.0001, S***

***p<0.001, S – Significant

Table 4.5: Association of post test level of practice regarding diabetic foot care among diabetic patients with their selected demographic variables in the experimental group.

N = 50

Demographic Variables	Moderate (7 – 8)		Adequate (>8)		Chi-Square Value
	f	%	f	%	
1.Age					$\chi^2 = 0.153$ d.f = 2 p = 0.927 N.S
<50 years	15	30.0	8	16.0	
51 – 60 years	12	24.0	5	10.0	
Above 60 years	7	14.0	3	6.0	
2. Sex					$\chi^2 = 0.152$ d.f = 1 p = 0.697 N.S
Male	15	30.0	8	16.0	
Female	19	38.0	8	16.0	
3. Religion					$\chi^2 = 2.457$ d.f = 2 p = 0.293 N.S
Hindu	30	60.0	14	28.0	
Muslim	4	8.0	1	2.0	
Christian	0	0	1	2.0	
4. Education					$\chi^2 = 8.006$ d.f = 2 p = 0.018 S*
Upto primary	24	48.0	5	10.0	
Primary to higher secondary	10	20.0	10	20.0	
College	0	0	1	2.0	
5. Occupation					$\chi^2 = 0.590$ d.f = 2 p = 0.745 N.S
Unemployed / Housewife	19	38.0	10	20.0	
Labourer	12	24.0	4	8.0	
Skilled	3	6.0	2	4.0	
Professional	-	-	-	-	
6. Income					$\chi^2 = 2.071$ d.f = 2 p = 0.355 N.S
Less than 5000	21	42.0	13	26.0	
5001 – 10000	12	24.0	3	6.0	
More than 10000	1	2.0	0	0	
7. Type of family					$\chi^2 = 0.079$ d.f = 1 p = 0.778 N.S
Nuclear	22	44.0	11	22.0	
Joint	12	24.0	5	10.0	
8. Family history of diabetes					$\chi^2 = 2.061$ d.f = 1 p = 0.151 N.S
Yes	16	32.0	11	22.0	
No	18	36.0	5	10.0	
Not known	-	-	-	-	
9. Duration of illness					$\chi^2 = 7.440$ d.f = 2 p = 0.024 S*
Less than 5 years	14	28.0	5	10.0	
5 - 10 years	15	30.0	3	6.0	
10 - 15 years	-	-	-	-	
More than 15 years	5	10.0	8	16.0	
10. Duration of insulin therapy					$\chi^2 = 4.210$ d.f = 3 p = 0.240 N.S
Less than 5 years	27	54.0	10	20.0	
5 - 10 years	6	12.0	3	6.0	
10 - 15 years	0	0	1	2.0	
More than 15 years	1	2.0	2	4.0	

***p<0.05, S – Significant, N.S – Not Significant

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