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ORIGINAL ARTICLE

A study to 'Evaluate the effectiveness of information education and communication package on practice regarding self-care among diabetes mellitus patients on insulin therapy' in selected area of Sunder-Nagar, District-Mandi (H.P.).

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Short Title- 'Evaluate the effectiveness of information education and communication package on knowledge regarding self-care among diabetes mellitus patients on insulin therapy'

Number of Tables – 2

Study duration – Dec 2018 to Dec 2021

INTRODUCTION

According to the International Diabetes Federation, the global prevalence of diabetes in 2014 was 8.3%, with 387 million individuals now experiencing the disease. More than 7.1% of the adult population in India has diabetes, which amounts to an estimated 62 million people. About 9 percent of people were affected in cities whereas only 3 percent were affected in rural areas. Additionally, it is believed that 35%-40% already exhibit some complication of the condition at the time of diagnosis. Every year, diabetes kills over a million people in India. The planning of a diabetic diet requires consideration of a number of elements. Diabetic diets are individualised for factors such as height, weight, age, sex, level of physical activity, and diabetes type. There are a number of guidelines that should be followed when creating a diet for someone with diabetes. These guidelines include: eating the proper kinds of carbohydrates; increasing your fibre intake; include antioxidants; eating at regular times; and eating smaller, more frequent meals. Exercising regularly and consistently is a crucial element of managing diabetes and pre-diabetes. Regular exercise can have a direct effect on reducing blood glucose levels by increasing the number of insulin

receptor sites in the tissue. In addition to lowering insulin resistance, weight reduction is a side effect. Due to its therapeutic effects, regular physical activity may reduce the number of diabetes medications required to achieve therapeutic blood glucose levels. Aside from the obvious benefits to your heart and circulatory system, regular exercise has also been shown to lower triglyceride and LDL cholesterol levels, raise HDL, lower blood pressure, and enhance circulation. When endogenous (from within the body) insulin is insufficient, patients must use exogenous (from outside the body) insulin (injections). Exogenous insulin is necessary for survival in Type 1 diabetics, and some patients may require as many as four or five injections every day to maintain a healthy blood glucose level. Even while diet and exercise are normally sufficient for people with Type II diabetes to maintain their normal blood sugar levels, they may temporarily need exogenous insulin at times of extreme stress, as when they are sick or recovering from surgery.

STATEMENT OF THE PROBLEM

A study to 'Evaluate the effectiveness of information education and communication package on practice regarding self-care among diabetes mellitus patients on insulin therapy' in selected area of Sunder-Nagar, District- Mandi (H.P.).

OBJECTIVES OF THE STUDY :

1.To assess the pre-test practice regarding self-care among diabetes mellitus patients on insulin therapy.

2.To assess the post test practice regarding self-care among diabetes mellitus patients on insulin therapy.

3.To assess the effectiveness of information education and communication package on practice regarding self-care among diabetes mellitus patients on insulin therapy.

4 To determine the association between pre-test and post test practices regarding self-care among diabetes mellitus patients on Insulin therapy with their selected demographic variables.

RESEARCH HYPOTHESES

H1 - There would be a significant difference in the level of practice regarding self-care before and after IEC package.

H2 - There would be a significant relationship between the post test level of practice among diabetes mellitus person on Insulin therapy.

H3 - There would be a significant association between the pre test level of practice and demographic variables among diabetes mellitus person on Insulin therapy.

H4 - There would be a significant association between the post test level of practice and demographic variables among diabetes mellitus person on Insulin therapy.

Conceptual Framework

The present study aimed to assess the effectiveness of information,education and communication package on knowledge and practice regardingself-care among diabetes mellitus. Conceptual framework of the presentstudy was developed based on the general system theory pioneered byLudwig Von Bertalanffy (1968).

Research Methodology

In this study Quasi Experimental research design was considered to the most appropriate for the study. A quasi experimental research group design is used to evaluate the effectiveness of information education and communication package on practice regarding self-care among diabetes mellitus patients on insulin therapy' in selected area of Sunder-Nagar, District- Mandi (HP.).

RESEARCH SETTING: The setting is the physical location and condition in which data collection take place. The setting of present study was selected area of Sundernagar, Distt- Mandi (H.P.)

The criteria for selecting this setting was:

- Familiarity with the setting
- Availability of the subjects
- Feasibility of conducting the study.

POPULATION: The population for the present comprised of persons who are having diabetes mellitus on insulin therapy in selected area of Sunder-Nagar, District- Mandi (HP.).

TARGET POPULATION : The target population for the present comprised of persons who are having diabetes mellitus on insulin therapy in selected area of Sunder-Nagar, District- Mandi (HP.).

SAMPLE AND SAMPLING TECHNIQUE

The sample of the study comprised of the person of age group 30 years and above.The villages were selected on the convenience basis.The sampling technique of the present study was non probability convenient sampling technique.The sample for the study will be 400 patients with diabetes mellitus on insulin therapy. In that 200 patients will be in control group and 200 patients will be in experimental group.

DATA COLLECTION TOOLS AND TECHNIQUES

Selection and development of tool: Formulated by the following steps

- Planning of tool
- Reviewing research and non research literature by using books, journals and internet.

- Opinion from experts
- Material was finalized by guide.
- Investigator experience
- By observation

Data Collection Instruments:

Following data tools will be used in order to obtain the data:

- Demographic data profile sheet.
- Observational Checklist On practice regarding Self Care

Section A :Demographic data profile sheet

It is used for assessment of demographic variables such as age, gender, educational status, type of family, diet, family income, religion, marital status, occupation, area of living, exercise Duration of Diabetes mellitus, Duration of taking Insulin.

Section B: Observational Checklist On practice regarding Self Care

This is used to assess practice of diabetes mellitus patient on insulin therapy regarding self-care. This section consist of 20 questions The tool was ascertained in consultation with guide and experts from various nursing and medical field. The reliability of screening test for tools were obtained by Split Half Method

Data Collection procedure:

Written permission was taken from the head (sarpanch) of the village to conduct study. The investigator maintained the rapport with the subjects and explained about the study and its purpose. The coding was done to identify the subjects. Finding of the study revealed that full cooperation was given by the Sarpanch and family members.Study subjects were available, it tooks approximately 10-15 minutes to collect information from one subject. Language of tool was clear and easily understood by the study subject.

Data analysis

Data analysis is a systematic of research data and testing of research data and testing of research hypothesis using those data and the collected data was analyzed.

With expert guidance the following plan was made:

- Organized the data in master data sheet.
- Analysis of the data was done in accordance with the objectives of the study.
- Demographic data in the form of frequencies and percentage.

- Data was analyzed by using Statistical Package for Social Sciences (SPSS) programme (Version 19) and M.S Excel.
- Statistical consultant services was also concerned for analysis. The data obtained had been analyzed in terms of descriptive and inferential statistics.
- Mean, Standard deviation and T test and Chi square was used to test the hypothesis.
- Chi square was used to find out the association with dependent and independent variables.
- The data was represented in the form of tables and graphs where ever it is applicable

RESULTS

- **Frequency Distribution of Demographic variables:** The majority of them 84 (42%) in control group and 83 (41.5%) in experimental group belongs to age group of 41-50 yrs. Most of them 104 (52%) in control group and 103 (51.5%) in experimental group were male. In relation to marital status majority of them 136 (68%) in control group and 135 (67.5%) in experimental group were unmarried Most of 158 (79%) in control group and 155 (77.5%) in experimental group were Hindu. The majority of them 77 (38.5%) in experimental group and 76 (38%) in control group had their education up to higher secondary .From whole population majority of person 72 (35%) in control group and 70 (34%) were on Govt job As per monthly income highly earned income was 20,001-30,000 in experimental group by 68 (34%) and 66 (33%) in control group In relation to area of living 115 (57.5%) in control group and 112 (56%) population lives in urban area In relation to dietary pattern 102(51%) in control group and 101(50.5%) in experimental group were non- vegetarian About 102 (51%) in both group were doing.Shifting towards duration of diabetes majority of subjects has diabetes 101(50.5%) in experimental group and 100 (50%) in control group from 5-10 yrs About 101(50.5%) in experimental group and 100 (50%) in control group from 5-10 yrs were on insulin

Table 1 : Pretest and post test level of practice among diabetes mellitus patients on insulin therapy in experimental group and control group

CRITERIA MEASURE OF LEVEL OF PRACTICE SCORE

SCORE	PRE EXPERIMENTAL	PRE CONTROL	POST EXPERIMENTAL	POST CONTROL
GOOD(16-20)	0(0%)	0(0%)	145(72.5%)	0(0%)
AVERAGE(11-15)	37(18.5%)	38(19%)	55(27.5%)	41(20.5%)
POOR(0-10)	163(81.5%)	162(81%)	0(0%)	159(79.5%)

Maximum=20 Minimum =0

Table-1shows the distribution of pre testPretest and post test level of practice among diabetes mellitus patients on insulin therapy in experimental group and control group. Majority of persons in post test were 145 (72.5%) good practice level after intervention (IEC package).

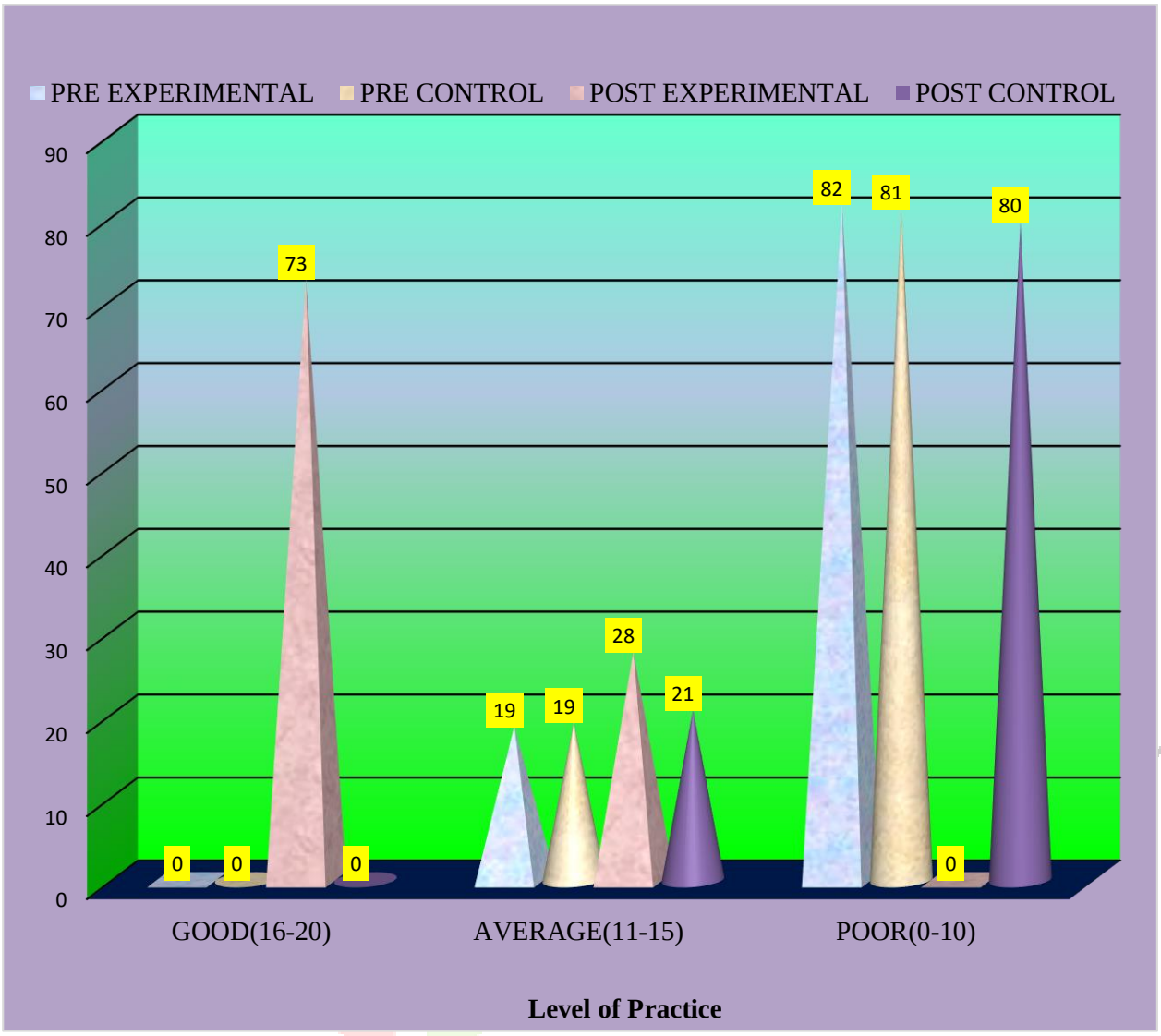

Figure 1: Bar graph showing Pretest and posttest level of practice among diabetes mellitus patients on insulin ther apy in experimental group and control group.

Table2: Association of pretest level of practice with selected demographic variable in experimental and control group

Demographic Variables		Experimental Group				Control Group				
Variables	**Options**	**Good**	**Average**	**Poor**	**Chi Test**	**Good**	**Average**	**Poor**	**Chi Test**	**Result**
Age	30-40 years	0	16	54	1.434	0	15	54	0.527	Not Significant
	41-50 years	0	14	69		0	15	69		
	Above 51 years	0	7	40		0	8	39		
Gender	Male	0	22	81	1.151	0	20	84	0.007	Not Significant
	Female	0	15	82		0	18	78		
	Transgender	0	0	0		0	0	0		
Marital Status	Married	0	8	31	1.791	0	10	29	2.236	Not Significant
	Unmarried	0	22	113		0	22	##		
	Widow	0	5	13		0	4	13		
	Divorced	0	2	6		0	2	6		
Religion	Hindu	0	28	127	4.937	0	30	##	3.513	Not Significant
	Muslim	0	5	27		0	8	23		
	Christian	0	1	0		0	0	0		
	Sikh	0	3	9		0	0	11		
Education	Illiterate	0	4	18	1.463	0	6	16	7.465	Not Significant
	Primary education	0	3	24		0	3	24		
	Higher secondary	0	14	63		0	9	67		
	Graduate or above	0	16	58		0	20	55		
Occupation	Housewife	0	4	26	4.641	0	6	23	0.479	Not Significant
	Labourer	0	6	48		0	9	47		
	Govt. Job	0	15	55		0	14	58		
	Private Job	0	12	34		0	9	34		
Income	Below Rs 10,000 /	0	4	32	7.203	0	6	29	0.810	Not Significant
	Rs 10001-20,000 /	0	7	53		0	14	48		
	Rs 20,001-30,000/-	0	15	53		0	12	54		
	Above Rs 30,000 /	0	11	25		0	6	31		
Area of Living	Urban	0	21	91	0.011	0	24	91	0.615	Not Significant
	Rural	0	16	72		0	14	71		
Diet	Vegetarian	0	17	72	1.085	0	14	74	3.436	Not

	Non vegetarian	0	17	84		0	20	82		Significant
	Eggetarian	0	3	7		0	4	6		
Exercise	Yes	0	16	86	1.093	0	22	80	0.892	Not
	No	0	21	77		0	16	82		Significant
Duration of Diabetes	Less than 5 years	0	16	63		0	18	63	0.934	Not
	5-10 years	0	17	84	0.377	0	17	83		Significant
	Above 10 years	0	4	16		0	3	16		
Duration of Taking Insulin	Less than 5 years	0	16	63		0	18	63	0.934	Not
	5-10 years	0	17	84	0.377	0	17	83		Significant
	Above 10 years	0	4	16		0	3	16		

Table -2: The above table shows that there was no significant association between of pretest level of Practice. Therefore the hypothesis2 was rejected that There would be a significant association between the pretest level of practice and demographic variables among diabetes mellitus person on Insulin therapy.

Table 3: Association of post test level of practice with selected demographic variablein experimental and control group

DEMOGRAPHIC VARIABLES		EXPERIMENTAL GROUP				CONTROL GROUP				
Variables	**Options**	**Good**	**Average**	**Poor**	**Chi Test**	**Good**	**Average**	**Poor**	**Chi Test**	**Result**
Age	30-40 years	52	18	0	0.489	0	16	53	0.659	Not Significant
	41-50 years	58	25	0		0	17	67		
	Above 51 years	35	12	0		0	8	39		
Gender	Male	79	24	0	1.878	0	23	81	0.347	Not Significant
	Female	66	31	0		0	18	78		
	Transgender	0	0	0		0	0	0		
Marital Status	Married	31	8	0	2.923	0	10	29	1.202	Not Significant
	Unmarried	93	42	0		0	25	##		
	Widow	15	3	0		0	4	13		
	Divorced	6	2	0		0	2	6		
Religion	Hindu	##	40	0	2.245	0	33	##	3.387	Not

	Muslim	20	12	0		0	8	23		Significant
	Christian	1	0	0		0	0	0		
	Sikh	9	3	0		0	0	11		
Education	Illiterate	15	7	0	0.365	0	6	16	6.362	Not Significant
	Primary education	19	8	0		0	3	24		
	Higher secondary	57	20	0		0	11	65		
	Graduate or above	54	20	0		0	21	54		
	Housewife	20	10	0		0	6	23		
	laborer	41	13	0		0	11	45		
Occupation	Govt. Job	53	17	0	14.7*	0	15	57	0.036	Significant
	Private Job	31	15	0		0	9	34		
	Below Rs 10,000 /-	24	12	0				28		
	Rs 10001-20,000 /-	45	15	0		0	7	47		
Income	Rs 20,001-30,000/-	45	23	0	5.512	0	15	54	0.799	Not Significant
	Above Rs 30,000 /-	31	5	0		0	12	30		
	Urban	81	31	0		0	7	88		
Area of Living	Rural	64	24	0	0.004	0	27	71	1.473	Not Significant
	Vegetarian	64	25	0		0	14	74		
Diet	Non vegetarian	75	26	0	0.956	0	23	79	14.73*	Significant
	Eggetarian	6	4	0		0	4	6		
Exercise	Yes	70	32	0	1.566	0	24	78	1.172	Not Significant
	No	75	23	0		0	17	81		
	Less than 5 years	56	23	0		0	20	61		
Duration of Diabetes	5-10 years	72	29	0	17.45*	0	18	82	1.515	Significant
	Above 10 years	17	3	0		0	3	16		

Duration of Taking Insulin	Less than 5 years	56	23	0	1.745	0	20	61	15.15*	Significant
	5-10 years	72	29	0		0	18	82		
	Above 10 years	17	3	0		0	3	16		

Table 3: Describes the association of selected demographic variableswith post test practice scores. There was a significant association ofselected demographic variables such asoccupation ($\chi 2=14.7$), diet ($\chi 2=14.73$), duration of diabetes mellitus ($\chi 2=17.45$), duration of taking insulin ($\chi 2 =15.15$) and post test practice scores. So, Hypothesis 7 tested true that there would be a significant association between the post test level of practice and demographic variables among diabetes mellitus person on Insulin therapy.

CONCLUSION

The study showed that the information education and communication package effects on practice regarding self-care among diabetes mellitus patients on insulin therapy' The findings of study also showed that by Diet, Exercise, duration of diabetes mellitus duration of taking insulin and Occupation was mostly affected by IEC activity as practice regarding self care was improved. Thus it can be concluded that information education and communication package effects on practice regarding self-care among diabetes mellitus patients on insulin therapy'.

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