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Research Article

**ASSESSMENT OF SELF-MANAGEMENT EDUCATION FOR
ADULTS WITH TYPE 2 DIABETES**Dr. Muhammad Hussain¹, Dr. Muhammad Hassan Farooq², Dr. Muhammad Abdul Qasim³¹Punjab Institute of Cardiology Lahore²Shandong Medical University P.R. China.³Shandong Medical University P.R. China.**Abstract:**

Objective: The study was carried out to examine the impact of patient education on understanding, self-management attitude and self-effectiveness in patients through type 2 diabetes. **Concept:** A randomized single-blind managed research was designed to evaluate the impact of education utilizing a pre and posttest concept. The study was carried out within a hospital of Pakistan. **Subjects:** The study populace contained eighty patients suffering through type 2 diabetes had been randomly allocated towards intervention or control group by enlisting number. **Intervention:** An education strategy was authored and provided towards intervention group. Understanding and self-management and self-reported attitude had been examined before and after the education strategy. Relating to the assessment of self-effectiveness of patients with type 2 type 2 diabetes, mean scores of type 2 diabetes self-effectiveness scales had been examined. The control group was given frequent treatment. **Results:** there had been immense variations between the intervention and control groups. Enhancements had been noticed in taking frequent walks ($p=0.043$), identifying nutrients through higher caloric content ($p=0.037$), suggested daily fat distribution ($p=0.024$), managing blood glucose levels to prevent additional complications ($p=0.002$), along with type 2 diabetes self-effectiveness mean scores ($p=0.006$). **Conclusion:** Patient education possessed a minimal impact about understanding and self-reported self-management attitude but an immense impact about self-effectiveness in patients through type 2 type 2 diabetes.

Keywords: patient education, understanding, self-management conducts, self-effectiveness, type 2 type 2 diabetes**Corresponding author:****Dr. Muhammad Hussain,**

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INTRODUCTION:

Diabetes mellitus is known as being an acute disease that is really a leading public disease. It impacts around two to five percent in the adult populace within evolved nations. The frequency of type 2 diabetes is expected increase more than a decade, as well as the realities, unveiled that 425 million individuals have diabetes within the whole world at the moment and even more than thirty-nine million people within the MENA Region; through 2045 this would increase to 67 million. There are 7.474.000 cases of diabetes within Pakistan in 2017 [1].

Diabetes education remains an important element of diabetes administration ever since the 1930s that is progressively well known as an essential part of acute disease administration. The aims of educating individuals with type2 diabetes have always been to enhance metabolic reduce; counter acute risks; enhance the standard of life through directing the attitude of patients and generate variations within knowledge, min dset, and attitude essential to preserve or enhance health [2]. Research indicates patients who also informed regarding their particular disease together with its medication; tend to generally be more inclined to prosper within managing their particular diseases. For instance, hypoglycemia is a type of in the most typical issues individuals with diabetes require to deal with; the administration that varies in accordance with medication and medications. Self-supervising blood glucose might apply to counter hypoglycaemic or hyperglycaemic episodes in order to recognize the influence of way of life and medication variations on glucose levels[3]. Having said that, many individuals with type 2 diabetes require to reduce weight. So diet requires to generally be individualized. Self-administration for individuals with acute health issues is extensively well known as being an essential part of medication. The patient is liable for the daily administration of their particular disease [3]. In order to thoroughly self-organize their particular disease, people might get the essential knowledge, skill, and self-confidence and take part within particular behaviors incorporating testing blood glucose and emotional administration (Knight et al., 2015). Self-confidence or self-efficacy alludes to the individual's notion within his or her capability to execute the attitude [4].

Aims and objectives

The fundamental aim in the research had been to assess the impact of patient education on knowledge, self-administration attitude and self-efficacy within patients with type 2 diabetes.

METHODOLOGY OF THE STUDY:

A randomized controlled experiment had been performed within a hospital in Pakistan. Patients had been qualified to take part if they had a medical diagnosis of type 2 diabetes, had gone to a minimum of one observe-up examination and had been in a position to render informed permission. The average age in the patients had been more than forty years and all except for one patient had been educated. Patients with type 2 diabetes, who also frequently went to the center for medication and observe up, had been provided registration within the research. Eighty patients confirmed to take part and had been randomly allocated to either the intervention or reduce group in accordance with their particular allocated number. The patients who also confirmed to take part had been provided enrollment numbers. To figure out the intervention and reduce groups, the phrase 'intervention' and 'control' had been developed on various piece of paper and having 'intervention' being driven whilst the first randomization. To specify the patients in the intervention as well as the reduce group, the numbers '1' and '2' had been developed on a various piece of paper and number '1' had been driven first, so patients with odd enrolment numbers had been allocated to the intervention group. They had been forty patients within each group.

Within order to organize the education strategy, a knowledge test had been evolved and implemented to the intervention and reduce group as being a pretest. In keeping with the outcomes in the pretest, the education strategy had been evolved and provided to the intervention group through the researcher. Two weeks shortly after the education, the knowledge test had been re-implemented to each group as post-test. Whilst the education had been not provided to the reduce group, the ideal responses had been mentioned to each patient following the post-test.

Statistical analysis

Data had been organized utilizing the Statistical Package for the Social Sciences (SPSS) for Windows version 20.0. In order to evaluate the intervention with the reduce group, chi-square and Fisher's exact test had been performed for dichotomous parameters. Unpaired Student's t-test had been applied to assess the mean pre-education and post-education strategy self-efficacy test scores in the intervention as well as the reduce groups. The variations had been considered to generally be statistically significant at $p < 0.05$.

RESULTS:**Patient Characteristics**

Typically there were no considerable variations in age, gender, education level, BMI (body mass index),

diabetes period, or treatment type in between patients with the intervention and the control groups as mentioned in below Table 1:

Table 1: Patient features in both the intervention and control group

Characteristics	Intervention	Control	p-value
	group (n=40)	Group (n=40)	
Gender			
Female	20	21	1
Male	20	19	0.833
Age (years)			
≤ 39	2	1	0.833
40-44	3	1	
45-49	5	7	
50-54	9	11	
55-59	11	9	
≥ 60	10	11	
Level of education			
< High school	14	16	0.084
High school	0	5	
> High school	26	19	
BMI (kg/m ²)			
< 29	9	9	0.965
29-31	20	21	
≥ 32	11	10	
Duration of diabetes (years)			
0-4	9	14	0.447
5-9	8	9	
10-14	12	11	
≥ 15	11	6	
Type of treatment			
Tablets	36	36	1
Insulin	16	15	1
Tablets and insulin	13	12	1

Knowledge***Hypoglycemia***

The causes of hypoglycemia have been asked from patients and they specifically designated 'forgetting snacks' as the reason for hypoglycemia. The outputs are further represented in below mentioned Table 2:

Characteristics	Intervention	Control	p-value
	group	group	
	(n=40)	(n=40)	
Forgetting snacks			
Before the education	26	22	0.494
After the education	34	31	0.568
Nutrient with high caloric Content			
Before the education			
Correct	10	13	0.622
Incorrect	30	27	
After the education			
Correct	20	10	0.037
Incorrect	20	30	
Daily fat distribution			
Before the education			
Correct	18	11	0.162
Incorrect	29	22	
After the education			
Correct	23	12	0.024
Incorrect	17	28	

Patients had been requested to mention the key benefits of blood sugar self-monitoring levels at nighttime. Prior to training, two patients with the intervention and none with the control group reported the requirement of blood sugar self-monitoring ($p=0.247$). Shortly after training, four patients with the intervention and one with the control group reported the requirement of blood sugar self-monitoring at nighttime ($p=0.179$).

Self-reported self-management behaviors regarding Physical Exercise

Patients had been requested their physical exercise practices, particularly they had been requested either or perhaps not they did stretching, walked routinely, swam, or cycled. All individuals in both groups responded that they recognized physical exercise to generally be 'walking' (as mentioned in Table 3).

	Intervention group	Control group	p-value
Self-management	(n=40)	(n=40)	
Walked regularly			
Before the education			
None	13	12	0.888
≤ 30 minutes	5	4	
31-60 minutes	22	24	
After the education			
None	6	16	0.043
≤ 30 minutes	7	5	
31-60 minutes	27	19	
Regulated blood glucose to prevent diabetic retinopathy			
Before the education			
Yes	11	6	0.274
No	29	34	
After the education			
Yes	21	7	0.002
No	19	33	

Table 4: Diabetes self-efficacy scale mean scores of the intervention and the control groups

	Intervention group	Control group	p-value
	(n=40)	(n=40)	
Before the education	20.0 ± 4.0	19.4 ± 4.3	0.538
After the education	21.9 ± 3.2	19.4 ± 4.4	0.006

DISCUSSION:

The objective of this particular research had been assessing the consequence of patient training or training on understanding, self-efficacy and self-management characteristics in patients suffering

type2 diabetes. The intervention exclusively manufactured for this specific research had been short-term and may not include long-term follow-up [5]. The research from some other randomized monitored research implies that self-management

techniques efficiently raise participants' understanding, indication self-management, some other self-management attitude such weight control, screening blood glucose, self-efficacy, and features to a health condition [6]. Nevertheless in This particular research, understanding enhanced to some minimal level in addition to being self-revealed self-management attitude, exclusively walking constantly and attempting to manage blood glucose levels in order to avoid diabetic retinopathy, enhanced considerably. Current observational study has revealed that even without the follow-up intervention, health-affiliated enhancements achieved from self-management programs tend not to persevere over the long-term [8] in fact it is not easy to differentiate between the particular advantage to such interventions and the nonspecific consequence to research involvement, which include enhanced patient understanding and determination.

Self-efficacy to patients nevertheless achieved considerably. The rise in self-efficacy as being a consequence this particular short-term intervention had been viewed to generally be due to patients considering they may effortlessly undertake strategies which had been supposed to them due to understanding achieved about dealing with their disease by modifying self-management attitude [9]. Having said that, self-efficacy requires to be considered with long-term interventions to determine the considerable consequence of training. During the course of the training program, queries affiliated to self-management characteristics including blood glucose self-monitoring as well as physical exercise were questioned so patients may discover from each other's reviews and patients' queries were answered too. It was also revealed by researchers that experiential discovering had been more considerable and culturally important than conventional lecture-based training [10].

CONCLUSIONS:

Even though follow-up happened exclusively two weeks after the training program, there were some enhancements in understanding, self-revealed self-management attitude and a considerable difference in diabetes self-efficacy between the intervention and control groups. This particular short-term intervention revealed that the training program which had been manufactured according to patients requires may enhance patient's management to their disease.

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