Assess the Effects of Diabetes Education Module on Emotional Distress Among Patient of Diabetes Mellitus at Selected Area of Rural Waghodiya Taluka

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Abstract:

Introduction: Diabetes is a major global health crisis, with India having the second-highest number of diabetics worldwide. Despite advancements in modern treatments, about half of diabetic patients struggle to achieve optimal metabolic control, leading to increased risk of complications and emotional distress. Aim: This study aimed to assess the effectiveness of a diabetes education module on emotional distress among patients in a selected rural area of Waghodiya Taluka, India. Methodology: The study utilized a quantitative research approach with a quasi-experimental design. A convenience sampling method was employed to select 120 diabetic patients from the chosen rural area. The Standardized Problem Areas in Diabetes-20 scale was used for assessment. The results indicated that the intervention group showed a significant reduction in emotional distress after the education module. Result finding: The study observed that in the control group, a significant majority (76.7%) experienced severe diabetes distress, while 23.3% reported low stress levels. Conversely, in the intervention group, the majority (61.7%) reported low stress, with 38.3% experiencing severe diabetes distress. Post-test results in the control group revealed that all participants (100%) had severe diabetes distress, while in the intervention group, the majority (98.3%) reported low stress, and only 1.7% had severe distress. The impact of the education module on emotional distress in the intervention group was statistically assessed using a paired t-test. The mean posttest score (18.13±1.983) was significantly higher than the pretest mean score (8.53±3.013), with a mean difference of 9.59. The obtained t-value (27.36, df=99, p=0.001) indicated a highly significant reduction in emotional distress after the intervention. Notably, the study findings suggested that the education module effectively reduced emotional distress in diabetes mellitus patients in the intervention group. Additionally, a significant association was found between type of family and marital status (p < 0.05). However, no significant associations were observed with other demographic variables, including age, gender, educational status, occupation, religion, family income, family history, previous knowledge, source of information, duration of diabetes, and medication status in the pre-test level of emotional distress among diabetes mellitus patients in the control group and post-test level in the intervention group, as determined by the chi-square test.

Keywords: Diabetes Mellitus, Emotional Distress, Educational Module.

1. INTRODUCATION

The global burden of diabetes mellitus is looming. It is estimated by the World Health Organization in 2016 that 422 million adults are living with the disease¹

537 million persons worldwide currently have diabetes, according to new data from the International Diabetes Federation (IDF). This is an increase of 16% (74 million) over the IDF's 2019 forecasts. Publicly available ahead of November 14th, World Diabetes Day, these new data underscore the concerning global rise in the prevalence of diabetes. Globally, the prevalence of diabetes has reached 10.5%, according to the most recent IDF Diabetes Atlas, with nearly half (44.7%) of people going untreated. According to IDF estimates, 1 in 8

persons, or 783 million adults, will have diabetes by 2045. Compared to the projected population growth of 20% over the same period, this would represent a 46% increase. Sometimes you could feel demoralized, anxious, or irritated..²

A medical condition known as depression results in depressed moods and frequently a lack of interest in onceenjoyed activities. It may interfere with your ability to perform at home and at work, including managing your diabetes. Diabetes problems including heart disease and nerve damage are more likely to occur when diabetes is poorly managed. Depression is two to three times as common in diabetics than in non-diabetics. Just 25% to 50% of diabetics who also have depression receive a diagnosis and course of treatment. However, most treatments—medication, therapy, or both—work incredibly well. Moreover, depression frequently worsens rather than improves without therapy³.

2. Methodology

A Quantitative research approach and quasi-experimental study research design was implied to conduct this study. The study was conducated at rural areas of waghodiya taluka patient with diabetes mellitus and sample size was 120. A connivence sampling technique was used for sample selection. Criteria for the sampling, inclusion criteria include participants those who are suffering with diabetes mellitus and who are willing to participate in the study and exclusion criteria patients associated with chronic illness and patients with diabetes mellitus associated with hypertension and patients with gestational diabetes. Tool used in this study was problem areas in diabetes scale-20. The data collection tool was sent to 5 experts out of whom 3 received back with their valuable suggestions and comments on the study tool.30 sample were taken for the pilot study. The reliability for standardize tool problem areas in diabetes scale –20 items. The tool was administered to 30 selected rural areas of waghodia. The reliability for emotional distress was calculated using the split-half method. Reliability for emotional distress 0.085 which is significant. Collected data were analyzed by using chi-square test.

3. Result

SECTION-1 Frequency and Percentage Distribution of Demographic Variables Of diabetes mellitus patients. N=120

The result depicts the frequency and percentage distribution of demographic variables of diabetes mellitus patients. according to their age in control group, majority 34(56.7%) were in 45-54 years of age, 15(25%) were in 35-44 years of age, 9(15%) were in 55-64 years of age and 2(3.3%) were in 60 years and above age. in intervention group, majority 29(48.3\%) were in 45-54 years of age, 26(43.3%) were in 55-64 years of age and 5(8.3%) were in 35-44 years of age.

Regarding gender of diabetes mellitus patients, in control group, maximum 32(53.3%) were female and 28(46.7%) were male. in intervention group half 30(50%) were male and 30(50%) were female.

As per educational status of diabetes mellitus patients, in control group, majority 38(63.3%) had primary education, 20(33.3%) had higher education and 2(3.3%) were illiterate. in intervention group, majority 36(60%) had primary education, 16(26.7%) had higher education, 6(10%) were illiterate and 2(3.3%) were graduate.

With regard to religion of diabetes mellitus patients, In control group maximum 38(63.3%) belongs to hindu and 22(36.7%) belongs to muslim. In intervention group maximum 36(60%) belongs to hindu and 24(40%) belongs to muslim.

According to type of family of diabetes mellitus patients, In control group maximum 38(63.3%) were living in nuclear family and 22(36.7%) were living in joint family. In intervention group maximum 43(71.7%) were living in joint family and 17(28.3%) were living in nuclear family.

Regarding family i9ncome of diabetes mellitus patients, In control group maximum 37(61.7%) had income of RS 10001-20000, 21(35%) had less than Rs 10000 and 2(3.3%) had Rs 20001-30000. In intervention group maximum 36(60%) had income of RS 10001-20000 and 24(40%) had less than Rs 10000.

As per marital status of diabetes mellitus patients, In control group majority 49(81.7%) were married and 11(18.3%) were widow. In intervention group majority 54(90%) were married and 6(10%) were widow.

With regard to occupation of diabetes mellitus patients, In control group maximum 24(40%) were housewife, 20(33.3%) were in private job, 14(23.3%) were laborer and 2(3.3%) were in govt job. In intervention group maximum 36(60%) were housewife, 22(36.7%) were in private job, and 2(3.3%) were in govt job.

According to family history of diabetes mellitus patients, In control group half 30(50%) had family history of diabetes mellitus and 30(50%) had no family history of diabetes mellitus. In intervention group half 31(51.7%) had family history of diabetes mellitus and 29(48.3%) had no family history of diabetes mellitus

As per source of information of diabetes mellitus patients, In control group majority 27(45%) had inormation from newspaper, 22(36.7%) had inormation from media and 11(18.3%) had inormation from family and friends. In intervention group majority 39(65%) had inormation from media, 18(30%) had inormation from newspaper, and 3(5%) had inormation from family and friends.

Regarding duration of diabetes mellitus patients, In control group maximum 31(51.7%) had diabetes for 4 years and 29(48.3%) had diabetes for 3 years. In intervention group maximum 38(63.3%) had diabetes for 3 years and 22(36.7%) had diabetes for 4 years.

As per any medication of diabetes are you taking among diabetes mellitus patients, In control group majority 33(55%) are taking meducation for diabetes and 27(45%) are not taking meducation for diabetes. In intervention group majority 42(70%) are taking meducation for diabetes and 18(30%) are not taking meducation for diabetes.

SECTION – II Distribution of Pre-Test Level of Emotional Distress among Diabetes Mellitus Patients. N=60

Results shows depicts the pre-test level of emotional distress among diabetes mellitus patients revealed that in control group, majority 46(76.7%) had severe diabetes distress and 14(23.3%) had low stress where as in intervention group maximum 37(61.7%) had low stress and 23(38.3%) had severe diabetes distress.

Distribution of Post-Test Level of Emotional Distress among Diabetes Mellitus Patients. N=60 $\,$

Results shows depicts the post-test level of emotional distress among diabetes mellitus patients revealed that in control group, all 60(100%) had severe diabetes distress where as in intervention group maximum 59(98.3%) had low stress and 1(1.7%) had severe diabetes distress.

SECTION – III-Effect of Education Module on Emotional Distress among Diabetes Mellitus Patients in Intervention Group N=60

Results shows depicts the Effect of education module on emotional distress among diabetes mellitus patients in intervention group which was tested by using paired t test. Mean posttest score was 18.13 ± 1.983 was higher than pretest mean score 8.53 ± 3.013 with mean difference of 9.59 and obtained (t value=27.36, df=99, p=0.001) was found statistically highly significant at p<0.05 level. Findings indicate that education module was effective in reducing the emotional distress among diabetes mellitus patients in intervention group.

SECTION - IV - Association between Pre-test level of emotional distress among diabetes mellitus patients with their selected demographic variables in control group n=60 Results shows depicts the association between Pre-test level of emotional distress among diabetes mellitus patients with their selected demographic variables in control group which was tested by using chi-square test. Result revealed that type of family and marital status was found significant association at p<0.05 but other age, gender, educational status, occupation, religion, family income, family history of diabetes mellitus, previous knowledge, source of information duration of diabetes and any medication of diabetes are you taking were found non significant with Pre-test level of emotional distress among diabetes mellitus patients in control group.

Association between Pre-Test Level of Emotional Distress among Diabetes Mellitus Patients with Their Selected Demographic Variables in Intervention Group N=60

Results shows depicts the association between Pre-test level of emotional distress among diabetes mellitus patients with their selected demographic variables in intervention group which was tested by using chi-square test. Result revealed that age, gender, type of family, educational status, occupation, religion, family income, marital status, family history of diabetes mellitus, previous knowledge, source of information duration of diabetes and any medication of diabetes are you taking were found non-significant with Pre-test level of emotional distress among diabetes mellitus patients in intervention group.

Association Between Post-Test Level of Emotional Distress Among Diabetes Mellitus Patients With Their Selected Demographic Variables In Intervention Group n=60

Results shows depicts the association between Post-test level of emotional distress among diabetes mellitus patients with their selected demographic variables in intervention group which was tested by using chi-square test. Result revealed that age, gender, type of family, educational status, occupation, religion, family income, marital status, family history of diabetes mellitus, previous knowledge, source of information duration of diabetes and any medication of diabetes are you taking were found non-significant with Post-test level of emotional distress among diabetes mellitus patients in intervention group.

4. Refernces

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