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Effectiveness of health promotion program on levels of knowledge regarding life style modification among patients with diabetes mellitus at Sakthi Amma hospital, Vellore

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Abstract
This study was aimed to assess the Effectiveness of health promotion program on levels of knowledge regarding life style modification among patients with diabetes mellitus. One group pre -test – post-test design was used in this study. Non probability purposive sampling technique was adopted to select 30 samples based on inclusion criteria. Finding of the study showed that the pre-test mean value was 15.8 and after the health promotion program post-test mean value was 32. The mean difference was 16.2 for levels of knowledge. The computed "t" value (t=14) was higher than the table value (3.66) at $p < 0.05$. Therefore, health promotion program on diabetes mellitus are effective in improving knowledge regarding their life style modification among patients with diabetes.

Keywords: Effectiveness, health promotion program, levels of knowledge, life style modification

Introduction
Diabetes is a chronic, metabolic disease characterized by elevated levels of blood glucose which leads over time to serious damage to the heart, blood vessels, eyes, kidneys, and nerves. The most common is type 2 diabetes, usually in adults, which occurs when the body becomes resistant to insulin or doesn't make enough insulin. In the past three decades the prevalence of type 2 diabetes has risen dramatically in countries of all income levels. Type 1 diabetes, once known as juvenile diabetes or insulin-dependent diabetes, is a chronic condition in which the pancreas produces little or no insulin by itself. For people living with diabetes, access to affordable treatment, including insulin, is critical to their survival. There is a globally agreed target to halt the rise in diabetes and obesity by 2025.

Change in eating habits, increasing weight and decreased physical activity are major factors leading to increased incidence of type 2 diabetes. Obesity is the most important modifiable risk factor. Smoking is an independent risk factor for type 2 diabetes mellitus. Diet and exercise are primary therapeutic options for its management. Dietary management should not only aim to achieve glycaemic control but to normalise dyslipidaemia. Smoking cessation reduces the risk of morbidity and mortality in CAD. Exercise improves the condition of a diabetic patient. Exercise includes yoga practices which have a role to play in the prevention of type 2 diabetes.

WHO recommended that adherence to the medications can promote the population's health and minimize long-term complications of the disease. Lifestyle variables include meal habits, exercise state, drinking state and smoking state. And also Modification in these factors would result in improved compliance towards hypoglycemic agents.

Statement of the Problem
Effectiveness of health promotion program on levels of knowledge regarding life style modification among patients with diabetes mellitus at Sakthi Amma Hospital, Vellore.

Objectives
* To assess the pre-test and post -test levels of knowledge regarding life style modification among patients with diabetes mellitus.

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- To determine the effectiveness of health promotion program on levels of regarding life style modification among patients with diabetes mellitus.
- To determine the association between post-test levels of knowledge regarding life style modification and selected demographic variables among patients with diabetes mellitus.

Hypotheses
H₁- There is a significant difference in pre and post -test levels of knowledge regarding lifestyle modification among patients with diabetes mellitus at Sakthi Amma Hospital t.

H2- There is a significant association between post- test levels of knowledge regarding lifestyle modification and selected demographic variables among patients with diabetes mellitus at Sakthi Amma Hospital.

Methodology
The study was conducted to determine effectiveness of health promotion program on levels of knowledge regarding life style modification among patients with diabetes mellitus at Sakthia Amma Hospitals, Vellore. A Pre-Experimental one group pre test-post-test design was used in this study. The conceptual framework of this research was based on modified Kolcaba's theory of comfort. The instrument used for data collection had two sessions

- **Section – A:** Deals with demographic variables, such as age, gender, religion, marital status, educational status, occupation, monthly income, type of family, type of work, residential area, dietary pattern, habit, any family history of diabetes mellitus, previous knowledge on diabetes mellitus, sources of information.
- **Section – B:** It consists of structured interview schedule to assess knowledge regarding life style modifications among patients with diabetes mellitus. It has 40 multiple choice questions. Each question had 4 options out of which one is correct answer. For each correct response a score of "1" (one) and for wrong response "0" (zero) score is given. The total score was 40.

Data collection
Ethical clearance was obtained from college research committee members and written permission from head of institution to conduct the study. The patients with diabetes mellitus was informed regarding the study and written consent was obtained from the sample. Pre-test Assessment on levels of knowledge was done using structured questions prepared by investigator. Health promotion program regarding life style modifications was given to the selected samples. After 2 weeks, the post-test was obtained to assess the post-test levels of knowledge regarding life style modifications.

Plan for Data Analysis
Distribution of demographic variables is analysed by Descriptive statistics (Mean, standard Deviation). To find out the effectiveness of health promotion program on levels of knowledge and attitude among patient with diabetes mellitus, the inferential statistics (paired 't' test) is used. To find out the association between the post-test levels of knowledge, attitude and selected demographic variables, the inferential statistics ('chi' square test) is used.

Study findings
The effectiveness of health promotion program on life style modification assessed by comparing Pre and Post-tests scores. Finding of the study showed that the pre-test mean value was 15.8 and after health promotion program the post-test mean value was 32. The mean difference was 16.2 for levels of knowledge. The computed "t" value (t=14) was higher than the table value (3.66). This shows that health promotion program was effective in improving levels of knowledge regarding life style modification among patients with diabetes mellitus. The 'chi' square values of selected demographic variables on post-test levels of knowledge about effectiveness of health promotion program among patients with diabetes mellitus shows age, gender, religion, educational status, occupation, residential area, sources of information as significant, at level $p < 0.05$, whereas the demographic variable like, marital status, Monthly income in INR, type of family, type of food, any family history of diabetes mellitus, previous knowledge are non-significant.

Table 1: Effectiveness of health promotion program on levels of knowledge regarding life style modifications among patients with diabetes mellitus. (n=30)

Levels of Knowledge	Mean	Standard Deviation	Mean Difference	Paired 't' Test
Pre Test	15.8	7.34	16.2	14
Post Test	32	3.1		

Conclusion
Based on the study finding, there was significant increase in the levels of attitude among patients with diabetes. The finding of the study was consistent with the review of literature supports. The findings may be generalized to the patients with diabetes mellitus Research design adopted for the study was pre experimental, one group pre and post-test design. The dependent variable for this study was knowledge of adults regarding life style modification of DM. Independent variable was health promotion program.

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