



“Cheeni Kum” - a Comprehensive Education Program (CEP) to empower patients on Self-Management of Diabetes

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Abstract

Introduction: Diabetes mellitus is one of the leading causes of death and disability worldwide. Information and education empower the patient by improving the self-management behaviour and better control of disease. **Methods:** Interventional study to assess the effectiveness CEP on self-management of Diabetes. Pre-test administered to 50 adult patients at Endocrine OPD through purposive sampling. The tool included socio-demographic and disease-related variables, along with the Skills, Confidence, and Preparedness Index (SCPI). "Cheeni Kum" is a patient-centered CEP developed as part of the Diabetes Self-Management Education Program, based on the ADCES 7 framework and validated by domain experts. A post-test was conducted after a 3-month follow-up, with pre- and post-HbA1C levels monitored. **Results:** The post intervention SCPI scores were significantly higher than the pre-intervention scores SCPI scores. In 50 participants who underwent a CEP intervention, mean HbA1c improvement was evident through paired t-Test. **Conclusions:** The CEP was highly effective in improving the three domains of skills, confidence, and preparedness of Self Care Management in Diabetes.

Keywords: Self-Management, Diabetes, Comprehensive Education Program, SCPI, ADCES



Introduction

Diabetes mellitus stands as a prominent contributor to global mortality and morbidity rates. Patient empowerment through information and education is pivotal, fostering improved self-management behaviors and disease control. Prevention and management strategies include adopting specific behaviors and lifestyles, such as regular exercise, adherence to healthy dietary patterns, abstaining from smoking, and maintaining optimal levels of fat and glucose in the blood.¹

The Self-Care Confidence and Preparedness Instrument (SCPI) is a specialized tool developed to evaluate three key dimensions—Knowledge, Confidence, and Preparedness—pertinent to clinical settings. It provides prompt feedback, facilitating personalized patient education strategies.²

The ADCES7 framework offers a structured approach for assessing, intervening, and evaluating the needs of individuals and populations affected by diabetes and other cardiometabolic conditions.³

The HbA1C (glycated hemoglobin, glycosylated hemoglobin, or A1c) test is utilized to assess an individual's glucose control level. This test provides an average of the blood sugar level over the preceding 90 days, expressed as a percentage.⁴

Methodology

A one group Pre-test Post-test study was conducted on 50 patients through purposive sampling in Endocrine OPD of a tertiary care hospital. All willing patients above the age of 25 with no known mental or behavioural disorder were included in the study. Diabetes self-management capacity of samples was assessed through SCPI along with HbA1C level of the patient. A CEP was delivered over one hour with the help of role plays, health talk and interaction session based on components of ADCES7 covering Nutrition, Physical exercise, Medication, Effective coping, Self-Monitoring, Positive Psychology and Prevention of Complications. The samples were re-assessed after three months, both SCPI and HbA1C.

Results

Majority (29,58%) of the respondents were female, 32 were educated up to Higher Secondary and rest received Primary education. As many as 22 samples above 55 years of age, followed



by 19 from 41 to 55 years. All are cases of Type II DM, 27 on Insulin in addition to Oral Hypoglycaemic Agent (OHA), 22 on exclusive OHA.

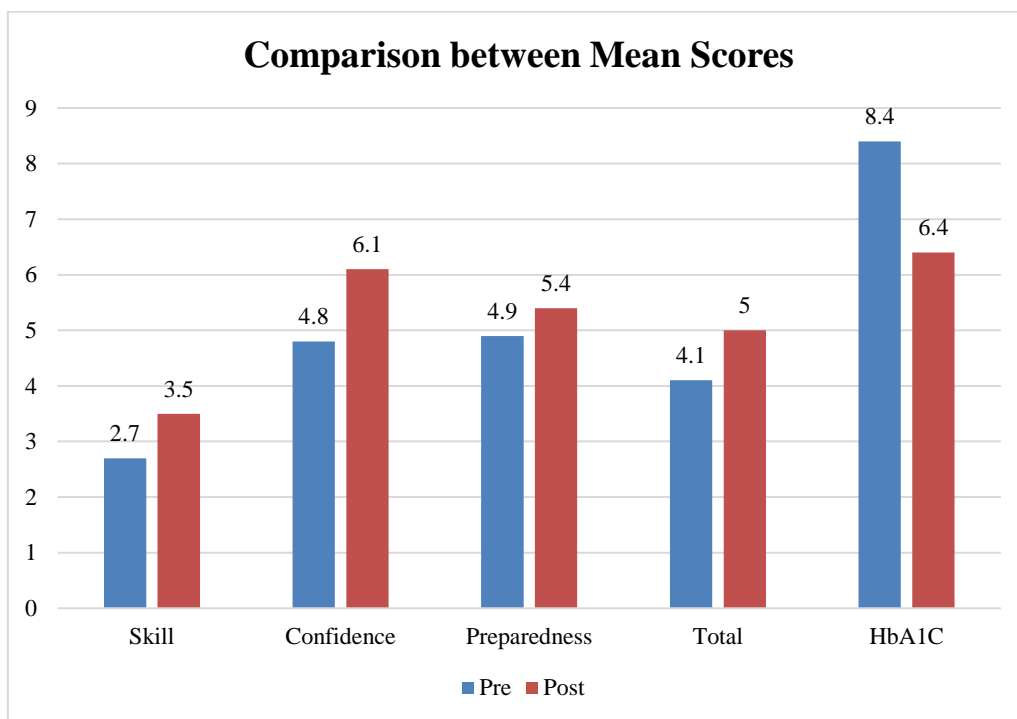


Figure: 1 Bar graph on Mean scores in all three categories

Figure 1 shows The Mean Scores in all three categories, skill, knowledge and preparedness and total SCPI Score have improved post intervention. There is also a reduction in average HbA1C level of the samples.

At 95% Confidence Interval and degree of freedom = 49, t value between sample means of pre and post-test is for Skill = 19.2877, Confidence = 24.1536, Preparedness = 6.6670, Total = 22.3885, HbA1C = 3.4226, which is statistically highly significant. Hence the null hypothesis is rejected.

Ethical approval

This research was undertaken following ethical approval from the Institutional Ethical Committee. Prior to participation, willing individuals provided informed consent after receiving a comprehensive explanation of the study's objectives. Participants retained the freedom to withdraw from the study at any point. Confidentiality of participant information was strictly maintained and utilized solely for research purposes.



Conclusion

‘Cheeni Kum’, a CEP developed by the researchers based on ADCES 7 is effective for Diabetes Self-Management. It provides a practical model for empowerment through informed decision making among individuals living with Diabetes and related conditions.

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