

AUTHORS

Annie Mattilda R, Chhavi Mehra, Ankitha Sequeira, Jeny Joseline, Shivtosh Kumar

TITLE

A 270-day Retrospective Longitudinal Study of Decreased Pharmacologic Dependence in Type 2 Diabetes via Tailored Lifestyle Modifications

BACKGROUND AND AIM

Rising incidence of Type 2 Diabetes (T2D) is strongly associated with factors such as urbanization, an ageing population, and increasingly inactive lifestyles, contributing to significant health and economic challenges. The SugarFit Diabetes Reversal and Management Program (SDRMP) employs a personalised, lifestyle-focused approach—integrating tailored nutrition, fitness, and behavioural coaching—to assess its effectiveness in enhancing clinical outcomes and decreasing medication dependence in T2D individuals.

METHODS

This retrospective study evaluated 815 T2D participants (628 male, 187 female) enrolled in SDRMP over 9 months. The program included personalized dietary counselling, customised exercise plans, and deeply empathetic lifecoaching with continuous support via virtual consultations. Clinical parameters (glycated haemoglobin (HbA1c), fasting blood sugar (FBS), body mass index (BMI), and weight), were assessed at baseline and quarterly follow-ups to track progress. Medication dosage titrations were guided by Sugarfit's algorithm-derived medication scores. Two-tailed significance tests evaluated the program's efficacy.

RESULTS

Participants experienced a remarkable decline in HbA1c levels, from $8.71 \pm 1.52\%$ at Q0 to $6.67 \pm 0.86\%$ at Q1, $6.56 \pm 0.92\%$ at Q2, and $6.58 \pm 0.84\%$ at Q3. Weight dropped from 77.29 ± 13.00 kg at Q0 to 72.33 ± 11.74 kg at Q3. Further progress was noted in FBS, decreasing from 154.49 ± 48.28 mg/dL at Q0 to 112.62 ± 23.15 mg/dL at Q3. Both HbA1c and weight showed significant reductions ($p < 0.001$). Medication scores significantly decreased from Q0 to Q3: Total med (1.51 ± 1.50 to 0.20 ± 0.22), oral hypoglycemic agents (1.19 ± 1.36 to 0.00), Metformin (0.24 ± 0.09 to 0.20 ± 0.22), Insulin (0.07 ± 0.48 to 0.00), reflecting reduced medication dependency.

CONCLUSION

The SDRMP proved effective in reducing HbA1c by $2.13 \pm 1.46\%$, and weight by 4.60 ± 4.54 kg, and decreasing medication dependency, highlighting its potential in T2D management.