

A mixed method study with diabetic patients to reverse and manage components of metabolic health

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INTRODUCTION

The increasing prevalence and impact of diabetes on global health, highlights the need for comprehensive interventions to address its burden, improve outcomes, and promote healthier lifestyles in underprivileged communities.

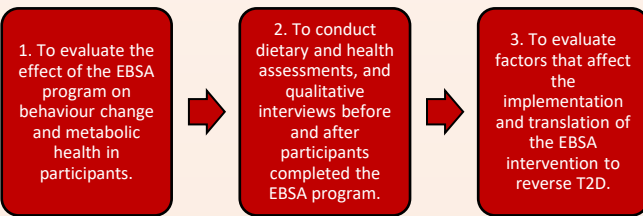
This project is a collaboration between The Noakes Foundation (TNF) and Eat Better South Africa (EBSA). TNF was established to science's understanding of the benefits of a low-carb high-fat (LCHF) diet by providing evidence-based information on optimum nutrition. EBSA runs 6-weeks nutrition education programs to empower people to improve their health by making the best dietary choices available to them.



AIM

This study aims to evaluate the effectiveness of a nutrition education program in reversing Type 2 Diabetes (T2D) and managing metabolic health components in DuNoon, Western Cape.

OBJECTIVES



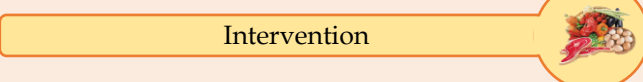
METHODS

A mixed method design was used, involving diet assessments, risk factors and food security questionnaires, blood markers (HbA1c and fasting glucose), body and blood measurements, and focus group discussions (FGDs).



Recruitment

23 participants (6 men, 17 women) were recruited at the Dunoon clinic and completed baseline assessments.



Intervention

Participants actively engaged in the EBSA program, including nutrition education sessions and interviews.

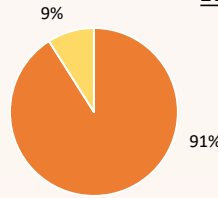


Testing

Follow-up assessments occurred after program completion, with additional FGDs conducted.

The study is ongoing, and participants' metabolic and body composition measurements will be assessed 6 months post EBSA, and at the 1-year follow-up mark.

RESULTS



Preliminary findings revealed high program completion rates of 91% with 81% of the participants attending all six EBSA sessions.

Figure 1: Program Completion Rates.

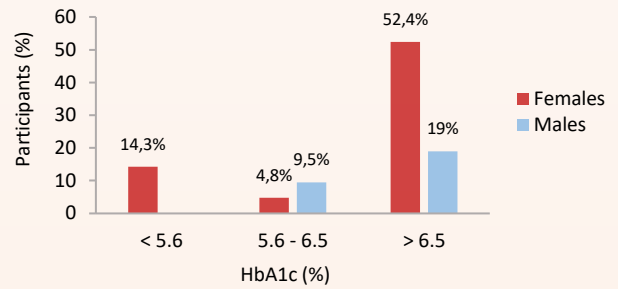


Figure 2: Baseline HbA1c levels for men and women of the study.

Participants were either diagnosed with diabetes or prediabetes, with an HbA1c level within the alarming range of above 5,6%. On average, women's HbA1c at baseline was 9.1% and men's was 10.57%.

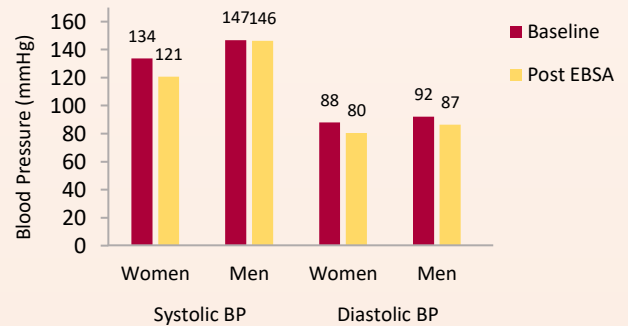


Figure 3: Blood Pressure measurements before and post EBSA for men and women.

Most women and men were classified with high blood pressure with an average of 133.8/88 mmHg for women and 146.8/92.2 mmHg for men. Post EBSA program, women had an average reduction of 13.1 mmHg (systolic) and 7.6 mmHg (diastolic) in blood pressure, while men showed reductions of 0.7 mmHg (systolic) and 5.7 mmHg (diastolic).

FGDs also uncovered participants' initial negative emotions and challenges, transforming into a sense of belonging and comfort after the EBSA program.

Post EBSA data collection is ongoing, with follow-up measurements until March 2024.

CONCLUSION

Nutrition education shows potential in improving metabolic health in diabetic patients. Challenges in recruitment, follow-up, clinic integration, and financial constraints highlight the need for enhanced support and healthcare services in under-resourced communities. Comprehensive health and nutrition interventions should be prioritised to address diabetes and metabolic diseases in these communities effectively.

ACKNOWLEDGMENTS

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