

Exploring benefits of a 12-week structured dietary counselling program in non-communicable disease patients in Bandar Kuala Krai Health Clinic

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ABSTRACT

Introduction: Chronic diseases such as diabetes, dyslipidaemia, and hypertension are significant contributors to the global burden of non-communicable diseases (NCDs). Dietary interventions, including structured dietary counselling by a dietitian, have been shown to have positive effects on disease management. However, limited research has focused on the effects of a structured dietary counselling program specifically over a 12-week period on HbA1c control, LDL-cholesterol control, and blood pressure control among patients with these chronic conditions especially in primary care settings. This cross-sectional study aimed to assess the effects of a 12-week structured dietary counselling program provided by a dietitian on HbA1c control, lipid control, and blood pressure control in a group of NCD patients. **Materials and Methods:** A total of 103 patients diagnosed with diabetes, dyslipidaemia, and/or hypertension were enrolled in the program between January 2022 and December 2022. Baseline clinical parameters, including HbA1c levels, lipid profiles, and blood pressure measurements, were recorded. The structured dietary counselling program consisting of individualized meal planning and nutrition education, including carbohydrate counting, sodium and fat food content, and reading food labels. Follow-up assessments were conducted at 12 weeks to evaluate changes in the clinical parameters. **Results:** Preliminary findings from this study demonstrated significant improvements in HbA1c control, lipid control, and blood pressure control following the 12-week structured dietary counselling program. Mean HbA1c levels decreased from baseline (baseline: $9.4\% \pm 2.1$; 12 weeks: $8.0\% \pm 1.9$, $p < 0.001$). Patients also exhibited improvements in LDL-cholesterol (baseline: $3.8\text{mmol/L} \pm 1.5$; 12 weeks: $3.2\text{mmol/L} \pm 0.9$, $p < 0.05$). Furthermore, blood pressure measurements indicated significant decreases in both systolic and diastolic blood pressure ($p < 0.05$). **Conclusion:** This cross-sectional study provides preliminary evidence supporting the benefit of a 12-week structured dietary counselling program led by a dietitian in improving HbA1c control, lipid control, and blood pressure control among patients with diabetes, dyslipidaemia, and/or hypertension. These findings emphasize the potential benefits of incorporating structured dietary counselling as an integral part of the management plan for individuals with chronic conditions in primary care. Further research with larger sample sizes and controlled studies is warranted to validate these results and explore the long-term effects of structured dietary counselling programs.