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The effect of mHealth program on behavior modification and health outcomes among patients with diabetes: A randomized controlled trial study

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Abstract

Background: Mobile health presents a promising alternative in the digital era. Mobile health apps (mHealth), when combined with the concept of self-management, are considered one of the methods for incorporating technology-based interventions into the healthcare system. Objective: This study aimed to determine the effect of mHealth (specifically, the Diabetic Care App) on foot care behavior, dietary behavior, foot condition, and fasting blood glucose levels among patients with uncontrolled diabetes mellitus. Methods: A single randomized controlled trial was conducted at a government-run primary clinic in Northern Malaysia, involving 58 patients with uncontrolled diabetes who were assigned to two groups. The intervention group received the Diabetic Care App, attended a 2-hour face-to-face session, and was included in a WhatsApp group, while the control group received standard care. Relevant assessments were conducted for both groups in Week 1 and Week 5. The study was

conducted from February 2020 to November 2020, and parametric and non-parametric statistics were used for data analysis. Results: Pretest-posttest comparisons in both groups revealed significant findings for foot care behavior (p <0.01), dietary behavior (p <0.01), and foot condition (p <0.01), except for fasting blood glucose levels. In inter-group comparisons, a significant difference was observed only in foot care behavior (p <0.01) and dietary behavior (p [removed]

Author keywords

behavior modification; diabetes mellitus; health promotion; Malaysia; mHealth; mobile health application; technology-based intervention

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