

**Efektifitas Virtual Health Coaching berbasis Android dalam Perubahan HbA1C,
Pengetahuan, dan Kualitas Hidup
Penyandang DM Tipe 2**

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. ABSTRAK

Latar belakang: Virtual health coaching (VHC) berbasis android memiliki potensi untuk meningkatkan pengelolaan diri pada penyandang Diabetes Mellitus Tipe 2. Namun, aplikasi yang dirancang khusus untuk penderita diabetes di Indonesia belum pernah diteliti sebelumnya.

Tujuan penelitian: mengembangkan aplikasi *virtual health coaching* berbasis *android* dan mengetahui pengaruhnya terhadap perubahan HbA1C, pengetahuan, dan kualitas hidup penyandang DMT-2

Metode penelitian: Penelitian ini terdiri dari dua jenis penelitian: kualitatif (Tahap 1) yang melibatkan wawancara mendalam dengan 9 penyandang DM, 6 care giver, dan FGD dengan 6 petugas kesehatan sebagai dasar pengembangan aplikasi (tahap 2), serta kuantitatif (Tahap 3) menggunakan desain quasi experimental dengan 29 orang kelompok intervensi dan 33 orang kelompok kontrol. Data dianalisis untuk mengukur pengaruh aplikasi VHC terhadap perubahan HbA1C, pengetahuan, dan kualitas hidup penyandang DMT2 selama 3 bulan.

Hasil penelitian: Penelitian tahap 1 menemukan 2 tema pengalaman penyandang DMT2 dalam manajemen diabetes, 1 tema pengalaman keluarga atau caregiver dalam memberikan dukungan sosial, dan 1 tema pengalaman petugas kesehatan dalam memberikan layanan kesehatan. Hasil penelitian tahap 2 menunjukkan bahwa aplikasi ini memiliki usability yang dapat diterima dengan skor SUS dalam kategori B dan adjective ratings yang baik. Penelitian tahap 3 menunjukkan bahwa tidak ada perbedaan signifikan dalam kadar HbA1c sebelum dan setelah intervensi baik pada kelompok intervensi maupun kontrol, meskipun terdapat penurunan kecenderungan dalam kedua kelompok. Pengetahuan meningkat secara signifikan dalam kelompok intervensi, tetapi tidak ada perubahan yang signifikan dalam kelompok kontrol. Kualitas hidup juga meningkat secara signifikan dalam kelompok intervensi, sementara dalam kelompok kontrol tidak ada perubahan yang signifikan

Kesimpulan: Tidak ada pengaruh penerapan virtual health coaching terhadap perubahan HbA1C pada penyandang DMT2, ada pengaruh penerapan *virtual health coaching* terhadap pengetahuan penyandang DMT2 dan kualitas hidup. Aplikasi ini bisa menjadi alternatif pilihan yang bisa digunakan secara berkelanjutan.

Kata kunci: Diabetes Tipe 2, virtual health coaching, HbA1C, pengetahuan, kualitas hidup

Abstract

Background: Android-based Virtual Health Coaching (VHC) has the potential to enhance self-management in individuals with Type 2 Diabetes Mellitus. However, there has been no prior research on applications specifically designed for diabetes patients in Indonesia.

Aims: To develop an Android-based virtual health coaching application and assess its impact on changes in HbA1C levels, knowledge, and quality of life in individuals with Type 2 Diabetes Mellitus (DMT-2).

Methods: This study consists of two types of research: qualitative (Phase 1) involving in-depth interviews with 9 individuals with DM, 6 caregivers, and a focus group discussion (FGD) with 6 healthcare professionals as a basis for application development (phase 2), and quantitative (Phase 3) using a quasi-experimental design with 29 participants in the intervention group and 33 participants in the control group. Data were analyzed to measure the effect of the VHC application on changes in HbA1C levels, knowledge, and quality of life in individuals with DMT-2 over a 3-month period.

Result: Phase 1 of the research identified 2 themes related to the experiences of individuals with DMT2 in managing diabetes, 1 theme related to the experiences of family members or caregivers in providing social support, and 1 theme related to the experiences of healthcare professionals in providing healthcare services. Phase 2 findings indicated that the application had acceptable usability with a SUS score in category B and good adjective ratings. Phase 3 research showed that there was no significant difference in HbA1c levels before and after the intervention in both the intervention and control groups, although there was a decreasing trend in both groups. Knowledge significantly increased in the intervention group, but there was no significant change in the control group. Quality of life also significantly improved in the intervention group, while there was no significant change in the control group.

Conclusion: There was no impact of the implementation of virtual health coaching on HbA1C changes in individuals with DMT2. However, there was an impact on the knowledge and quality of life of individuals with DMT2. This application could be considered as an alternative option for sustained use.

Keywords: Type 2 Diabetes, virtual health coaching, HbA1C, knowledge, quality of life.

