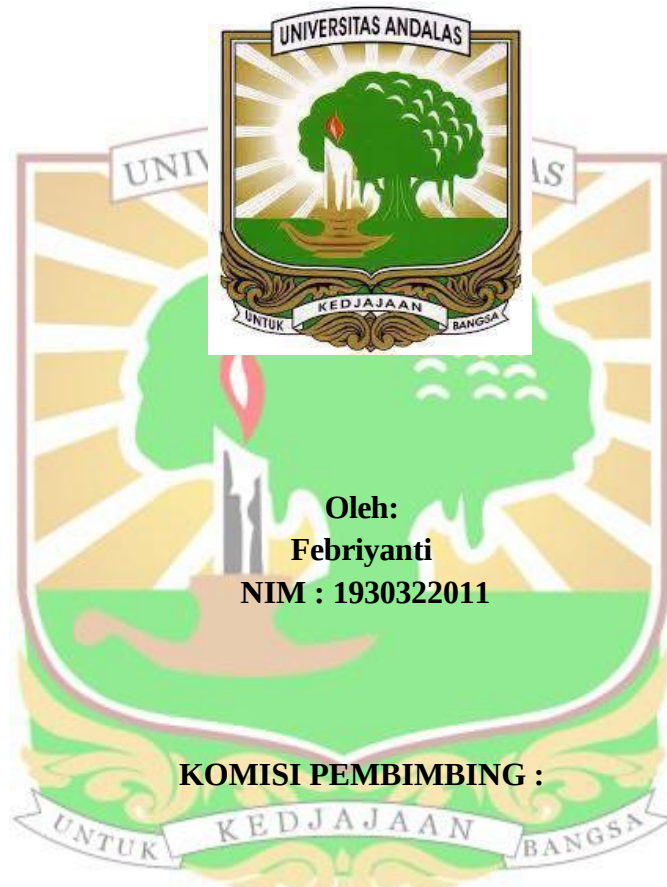


DISERTASI

**MODEL FEBI (FOKUS EDUKASI BERBASIS INTERAKTIF) DENGAN
PENDEKATAN PERSONALISASI DAN ADAPTIF BERBASIS APLIKASI
DIGITAL PADA PENDERITA DIABETES
MELITUS TIPE 2**



**Oleh:
Febriyanti
NIM : 1930322011**

KOMISI PEMBIMBING :

**Prof, Dr, dr, Masrul, MSc, SpGK Dr.
dr. Najirman, SpPD-KR, FINASIM
Dr. Ahmad Syafruddin Indrapriyatna, MT**

**PROGRAM DOKTORAL KESEHATAN MASYARAKAT
FAKULTAS DOKTERAN
UNIVERSITAS ANDALAS
TAHUN 2025**

Model Edukasi Fokus Edukasi Bebas Interaksi (FEBI) dengan Pendekatan Personalisasi dan Adaptif Berbasis Aplikasi Digital pada Penderita Diabetes Melitus Tipe 2

ABSTRAK

Latar Belakang: Model Edukasi FEBI (Fokus Edukasi Berbasis Interaksi) dengan pendekatan personalisasi dan adaptif berbasis aplikasi digital dikembangkan untuk meningkatkan pengendalian glukosa darah pada penderita Diabetes Melitus (DM) tipe 2. DM merupakan penyakit kronis dengan risiko komplikasi serius, termasuk penyakit jantung koroner, gagal ginjal, retinopati, dan amputasi tungkai, yang berdampak pada kecacatan serta penurunan kualitas hidup.

Metode: Penelitian menggunakan desain mix-method dengan pendekatan ADDIE melalui lima tahap. Tahap I kualitatif dilakukan dengan in-depth interview dan collective interview untuk menggali perilaku penderita DM, dilanjutkan tahap kuantitatif cross-sectional guna mengidentifikasi faktor penyebab. Analisis data meliputi uji univariat, bivariat (chi-square), dan multivariat (regresi logistik). Tahap II–III meliputi perancangan serta validasi pakar terhadap model edukasi berbasis aplikasi. Tahap IV dilakukan uji coba model, dan tahap V evaluasi efektivitas melalui indikator pengetahuan, sikap, dan kadar glukosa darah.

Hasil: Analisis menunjukkan hubungan signifikan antara pendidikan, pengetahuan, sikap, pola makan, kondisi psikologis, dukungan keluarga, dukungan tenaga kesehatan, serta sarana informasi dengan pengendalian glukosa darah ($p < 0,05$). Faktor dominan adalah dukungan tenaga kesehatan dan fasilitas informasi ($p = 0,00$). Model Edukasi FEBI terbukti efektif (skor 81–100%) dalam meningkatkan pengetahuan, sikap, dan kemampuan pengendalian glukosa darah.

Diskusi dan kesimpulan: Hasil ini menegaskan pentingnya integrasi edukasi digital personalisasi dalam manajemen diabetes, dibandingkan edukasi konvensional. Model edukasi FEBI memberikan dukungan interaktif yang memperkuat komunikasi pasien dengan tenaga kesehatan serta menyesuaikan kebutuhan individu. Model ini direkomendasikan sebagai strategi edukasi inovatif bagi tenaga kesehatan di Puskesmas untuk mencegah komplikasi DM tipe 2.

Kata kunci: Diabetes Mellitus, edukasi interaktif, aplikasi digital, Model FEBI

Interactive-Based Focused Education Model (FEBI) with a Personalized and Adaptive Approach through a Digital Application for Patients with Type 2 Diabetes Mellitus

ABSTRACT

Background: The FEBI Education Model (Focus on Interactive Education) with a personalized and adaptive approach based on a digital application was developed to improve blood glucose control in patients with type 2 Diabetes Mellitus (DM). DM is a chronic disease with a high risk of complications, including coronary heart disease, kidney failure, retinopathy, and lower limb amputation, leading to disability and reduced quality of life.

Methods: This study employed a mixed-method design using the ADDIE approach through five stages. In Stage I, qualitative data were collected using in-depth and collective interviews to explore patient behaviors. Stage II involved a quantitative cross-sectional study to identify contributing factors, analyzed using univariate, bivariate (chi-square), and multivariate (logistic regression) tests. Stages II–III consisted of designing and validating the digital application-based educational model with expert review. Stage IV implemented a pilot trial, and Stage V evaluated effectiveness through indicators of knowledge, attitude, and blood glucose levels.

Results: Bivariate analysis revealed significant associations between education, knowledge, attitude, diet, psychological condition, family support, health professional support, and access to information facilities with blood glucose control ($p < 0.05$). Multivariate analysis identified health professional support and information facilities as dominant factors ($p = 0.00$). The FEBI Education Model proved highly effective (scores 81–100%) in improving knowledge, attitudes, and blood glucose control.

Discussion/Conclusion: These findings highlight the importance of integrating personalized digital education into diabetes management. Compared to conventional education, the FEBI Model provides interactive support that bridges patient–provider communication and adapts to individual needs. It is recommended as an innovative strategy for health professionals in primary care to prevent complications of type 2 DM.

Keywords: Diabetes Mellitus, interactive education, digital application, FEBI Model