

## INTISARI

Peningkatan prevalensi dan biaya pelayanan kesehatan penyakit komplikasi hipertensi di Indonesia mendorong perlunya optimalisasi pelayanan farmasi klinis oleh apoteker di fasilitas pelayanan kesehatan tingkat pertama dengan memanfaatkan teknologi informasi seiring dengan berkembangnya intervensi kesehatan digital. Penelitian ini bertujuan untuk mengembangkan aplikasi *smartphone* untuk intervensi apoteker dan menguji pengaruhnya terhadap kepatuhan minum obat, manajemen diri, kualitas hidup dan penurunan tekanan darah pasien hipertensi di puskesmas.

Penelitian dilaksanakan di Puskesmas Kota Palembang dan Kabupaten OKU Selatan, Provinsi Sumatera Selatan melalui 4 tahapan. Tahap I dan II menggunakan desain observasional deskriptif dengan pendekatan *cross sectional* untuk mendapatkan instrumen kuesioner versi bahasa Indonesia yang valid dan reliabel dan gambaran permasalahan yang dialami pasien hipertensi, penelitian tahap III menggunakan metode *User-Centered Design* (UCD) untuk merancang fungsi – fungsi yang perlu disediakan dalam sebuah aplikasi dan penelitian tahap IV uji coba aplikasi *smartphone* menggunakan desain *quasi experimental pre and post design with control*. Data dianalisis dengan uji univariat, bivariat dan multivariat.

Hasil penelitian tahap I diperoleh 407 subjek penelitian, menghasilkan kuesioner efikasi diri, manajemen diri dan kualitas hidup yang valid dan reliabel untuk responden di Indonesia, tahap II diperoleh 203 subjek penelitian dengan hasil tingkat kepatuhan minum obat rendah – sedang 51,2%, manajemen diri buruk 52,2 %, kualitas hidup rendah 38,9 %, pasien belum mencapai target tekanan darah 80,8%, tingkat pengetahuan rendah 54,2% dan efikasi diri rendah 62,6%. Penelitian tahap III diperoleh 32 subjek penelitian, menghasilkan intervensi kesehatan digital dalam bentuk komunikasi yang ditargetkan kepada pasien dengan fungsi – fungsi yang perlu disajikan dalam aplikasi *smartphone* yaitu edukasi, pengingat minum obat dan pesan diberi nama HypertensiCare. Penelitian tahap IV diperoleh 37 subjek penelitian kelompok intervensi dan 40 subjek penelitian kelompok kontrol. Hasil uji coba selama 4 minggu intervensi apoteker menggunakan aplikasi *smartphone* berpengaruh terhadap peningkatan kepatuhan minum obat ( $p=0,000$ ), manajemen diri ( $p=0,000$ ), kualitas hidup ( $p=0,002$ ) dan penurunan tekanan darah sistolik ( $p=0,001$ ). Intervensi apoteker menggunakan aplikasi *smartphone* secara signifikan membantu meningkatkan manajemen diri, kepatuhan minum obat, kualitas hidup dan penurunan tekanan darah sistolik pada pasien hipertensi di puskesmas.

**Kata kunci:** hipertensi, kepatuhan minum obat, manajemen diri, kualitas hidup, tekanan darah, *mhealth*

## ABSTRACT

The increasing prevalence and cost of health services for hypertension complications in Indonesia encourage the need to optimize clinical pharmacy services by pharmacists in primary healthcare facilities by utilizing information technology and developing digital health interventions. This study aims to develop a smartphone application for pharmacist intervention and test its effect on medication adherence, self-management, quality of life and blood pressure reduction in hypertension patients in health centres.

The study was conducted at the Palembang City Health Center and South O.K.U. Regency, South Sumatra Province through 4 stages. Stages I and II used a descriptive observational design with a cross-sectional approach to obtain a valid and reliable Indonesian language version of the questionnaire instrument and a description of the problems experienced by hypertension patients. Stage III research used the User-Centered Design (U.C.D.) method to design the functions that need to be provided in an application, and stage IV research trial of the smartphone application using a quasi-experimental pre and post-design with control design. Data were analyzed using univariate, bivariate and multivariate tests.

The results of the first phase of the study obtained 407 research subjects, producing a valid and reliable self-efficacy, self-management and quality of life questionnaire for respondents in Indonesia; the second phase obtained 203 research subjects with the results of low - moderate medication adherence levels of 51.2%, poor self-management 52.2%, low quality of life 38.9%, patients have not reached the target blood pressure 80.8%, low knowledge level 54.2% and low self-efficacy 62.6%. The third phase of the study obtained 32 research subjects, producing digital health interventions in the form of communication targeted to patients with functions that need to be presented in smartphone applications, namely education, medication reminders and messages named HypertensiCare. In the fourth phase of the study, 37 research subjects were in the intervention group and 40 in the control group. The results of a 4-week trial of pharmacist intervention using a smartphone application affect increasing medication adherence ( $p=0.000$ ), self-management ( $p=0.000$ ), quality of life ( $p=0.002$ ) and decreasing systolic blood pressure ( $p=0.001$ ). Pharmacist intervention using a smartphone application significantly helps improve self-management, medication adherence, and quality of life and decreases systolic blood pressure in hypertensive patients at the health centre.

**Keywords:** hypertension, medication adherence, self-management, quality of life, blood pressure, mhealth