INTISARI

Epilepsi merupakan penyakit neurologis kronis yang membutuhkan pengobatan jangka panjang. Manajemen pengobatan optimal dapat membantu pasien epilepsi diantaranya melalui intervensi digital (*mobile health application*). Tujuan penelitian ini adalah mengembangkan dan implementasi aplikasi kesehatan digital pada pasien epilepsi khususnya untuk mengamati peningkatan pengetahuan manajemen diri, kepatuhan, dan penurunan frekuensi kejang. Metode penelitian ini adalah *exploratory equential mixed methods* (penelitian kualitatif dan kuantitatif) dilakukan 3 tahap, yaitu: 1) studi pendahuluan berupa survei *need assessment* dan *focus group disscussion*, 2) pengembangan aplikasi serta uji coba model aplikasi pada *pilot test*, dan 3) uji implementasi aplikasi FarmaEps pada kelompok intervensi (*usual care* dan intervensi aplikasi selama 3 bulan) dengan metode penelitian quasi eksperimental yang dibandingkan dengan kelompok kontrol (hanya mendapatkan *usual care*). Penelitian ini dilakukan pada pasien epilepsi rawat jalan di RSUD Soewandhi Surabaya (kelompok kontrol), RSUD Haji Surabaya dan kelompok pasien epilepsi ODE (orang dengan epilepsi) sebagai kelompok intervensi. Berdasarkan hasil penelitian tahap *need asessment* pada 175 responden, diketahui fitur yang diinginkan dalam *mobile apps* meliputi: pengingat minum obat, pencatatan kejang, informasi penyakit dan obat, serta pelaporan keluhan obat. Uji implementasi aplikasi pada kelompok intervensi, diperoleh hasil bahwa aplikasi FarmaEps berpengaruh signifikan secara statistik terhadap peningkatan kepatuhan penggunaan obat antiepilepsi

dibanding kelompok kontrol (p<0,05). Hasil uji statistik juga menunjukkan memiliki pengaruh terhadap penurunan frekuensi kejang pada kelompok intervensi (*pre-post*) (p<0,05), namun tidak signifikan jika dibandingkan dengan kontrol. Persentase responden yang mengalami penurunan frekuensi kejang pada kelompok intervensi lebih besar (36,36%) dibanding kelompok kontrol (23,63%). Pada parameter pengetahuan manajemen diri tidak berpengaruh signifikan jika dibandingkan dengan kelompok kontrol, namun memberikan kenaikan persentase responden yang mengalami peningkatan skor pengetahuan manajemen diri dari sebelum pemberian aplikasi sebesar 12,27% menjadi 17,47%. Respon keberterimaan responden terhadap penggunaan aplikasi FarmaEps selama 3 bulan diukur menggunakan kuesioner SUS (S*ystem Usability Scale*) sebesar 70,05 % (*acceptable marginal*/ dapat diterima responden secara umum), *grade scale* "C", dan *adjective ratings* "*good*". Pengukuran respon keberterimaan penggunaan respon menggunakan kuesioner MAUQ (*Mobile Applications Usabilty Questionnaire*) memiliki persentase >50% pada masing-masing domain (kemudahan, tampilan, kepuasan dan kegunaan). Berdasarkan hasil analisa kualitatif wawancara responden setelah 3 bulan menggunakan aplikasi diketahui, jika aplikasi FarmaEps membantu responden dalam mengingatkan menggunakan obat, memberikan informasi obat, penyakit, pencatatan kejang dan keluhan. Namun aplikasi FarmaEps masih memiliki kelemahan diantaranya memiliki ukiran memori yang besar sehingga mempengaruhi stabilitas penggunaan, serta belum bisa *compatible* pada semua jenis *handphone*. Hasil pengembangan

aplikasi FarmaEps diharapkan dapat memberikan manfaat diantaranya dapat menjadi instrumen yang dapat digunakan secara mandiri oleh pasien epilepsi untuk meningkatkan kepatuhan dalam konsumsi obat, pencatatan kejang dan mengenali serta mengontrol pemicu kejang, mendapatkan informasi terkait penggunaan dan penyampaian keluhan penggunaan obat antiepilepsi. Aplikasi FarmaEps berpotensi menjadi instrumen intervensi oleh apoteker berbasis digital mendukung manajemen terapi pasien epilepsi dalam hal meningkatkan kepatuhan, dan mendapatkan informasi terkait manajemen diri, obat dan penyakit.

Kata kunci: Epilepsi, Aplikasi, FarmaEps, Kejang, Manajemen Diri, Kepatuhan

ABSTRACT

Epilepsy is a chronic neurological disease that requires long-term treatment. Optimal treatment management can help epilepsy patients, including through digital interventions (mobile health applications). The purpose of this study was to develop and implement a digital health application for epilepsy patients, specifically to observe improvements in self-management knowledge, compliance, and a reduction in seizure frequency. The research method used is exploratory sequential mixed methods (qualitative and quantitative research) conducted in three stages: 1) a preliminary study in the form of a needs assessment survey and focus group discussion, 2) application development and application model testing in a pilot test, and 3) testing the implementation of the FarmaEps application in an intervention group (usual care and application intervention for 3 months) using a quasi-experimental research method compared to a control group (receiving only usual care). This study was conducted on outpatient epilepsy patients at Soewandhi Hospital in Surabaya (control group), Haji Hospital in Surabaya, and a group of epilepsy patients (people with epilepsy) as the intervention group. Based on the results of the need assessment stage in 175 respondents, the desired features in mobile apps include: medication reminders, seizure recording, disease and medication information, and medication complaint reporting. The application implementation test on the intervention group showed that the FarmaEps application had a statistically significant effect on increasing antiepileptic drug compliance compared to the control group ($p<0.05$). The statistical test results also showed that it had an effect on reducing seizure frequency in the intervention group (pre-post) ($p<0.05$), but this was not significant when compared to the control group. The percentage of respondents who experienced a decrease in seizure frequency in the intervention group was greater (36.36%) than in the control group (23.63%). In terms of self-management knowledge, there was no significant effect when compared to the control group, but there was an increase in the percentage of respondents who experienced an increase in their self-

management knowledge score from 12.27% before the application was given to 17.47%. Respondents' acceptance of the FarmaEps application over a 3-month period was measured using the SUS (System Usability Scale) questionnaire, with a score of 70.05% (acceptable marginal/generally acceptable to respondents), a grade scale of “C,” and adjective ratings of “good.” The measurement of acceptance response to the use of the application using the MAUQ (Mobile Applications Usability Questionnaire) questionnaire had a percentage of >50% in each domain (ease, appearance, satisfaction, and usefulness). Based on the results of a qualitative analysis of respondent interviews after 3 months of using the application, it was found that the FarmaEps application helps respondents in reminding them to take their medication, providing information about medication, diseases, recording seizures and complaints. However, the FarmaEps application still has weaknesses, including large memory requirements that affect stability, and incompatibility with some types of mobile phones. The development of the FarmaEps application is expected to provide benefits, including serving as an instrument that can be used independently by epilepsy patients to improve compliance in medication consumption, seizure recording, and recognizing and controlling seizure triggers, as well as obtaining information related to the use and reporting of complaints about antiepileptic medication. The FarmaEps application has the potential to become a digital-based intervention tool for pharmacists to support the management of epilepsy patients in terms of improving compliance and obtaining information related to self-management, medication, and disease.

Keywords: Epilepsy, Application, FarmaEps, Seizures, Self-Management, Adherence