INTISARI PENELITIAN

Latar belakang: Diabetes melitus merupakan penyakit kronis yang apabila tidak dilakukan manajemen dapat menyebabkan gangguan mikrovaskuler maupun makrovaskuler. Indikator keberhasilan manajemen diabetes melitus adalah terkontrolnya kadar glukosa darah dan *glycated haemoglobin.* Manajemen diabetes melitus yaitu dengan edukasi, diit, aktivitas fisik dan farmakologi disertai pemantauan glukosa darah. *Smartphone* berpotensi dalam membantu manajemen diabetes melitus.

Tujuan penelitian: Tujuan dari penelitian ini adalah untuk mengetahui pengaruh penggunaan *smartphone* terhadap kadar glukosa darah dan *glycated haemoglobin* pada penyandang diabetes melitus tipe 2.

Metode: Penelitian ini merupakan penelitian *literature review*. *Database* elektronik yang digunakan adalah Pubmed, Science Direct, dan Cochrane. Kriteria inklusinya: literatur berbahasa Inggris, *original research*, tahun terbit 2008-2018, tersedia dalam *free fulltext*, sampel penelitian literatur adalah penyandang diabetes melitus tipe 2 dari semua rentang usia, intervensi literatur menggunakan *smartphone* atau *mobile phone*, memiliki luaran kadar glukosa darah dan/atau kadar *glycated haemoglobin*. Kriteria eksklusinya: literatur buku dan hasil seminar atau konferensi.

Hasil: Berdasarkan analisis 3 literatur, penggunaan *smartphone* memberikan pengaruh positif terhadap kadar glukosa darah dan *glycated haemoglobin*, yaitu dapat membantu menurunkan kadar glukosa darah dan *glycated haemoglobin* dari buruk ke sedang. Pengaruh tersebut karena adanya layanan edukasi, umpan balik dan monitor mandiri dalam aplikasi *smartphone*.

Kesimpulan: Penggunaan *smartphone* berpengaruh terhadap kadar glukosa darah dan *glycated haemoglobin*. Aplikasi *smartphone* memberikan layanan edukasi, *feedback* dan monitor mandiri sehingga meningkatkan pengetahuan dan kesadaran pasien dalam mengontrol glukosa darah.

Kata Kunci: Diabetes Melitus Tipe 2, Glukosa Darah, *Glycated Haemoglobin*, *Smartphone*

ABSTRACT

Background: The number of people with diabetes mellitus worldwide continues to increase. The majority are type 2 diabetes mellitus. Diabetes can cause complications, and lead to death. Need for management of diabetes patients to avoid complications. One of the main indicators in the success of diabetes management is to look at blood glucose levels and glycated hemoglobin levels. Smartphones that can be taken anywhere, and can connect to the internet can help in diabetes management.

Objective: To know the effect of smartphone usage on blood glucose level and glycated hemoglobin in type 2 diabetes mellitus.

Methods: This research is a literature review study. Database used in this research is Pubmed, Science Direct and Cochrane. The literature inclusion criteria: English-speaking, published in 2008 to 2018, are available in free fulltext, research sample is type 2 diabetes mellitus, intervention in literature of smartphone or mobile phone usage, has blood glucose levels and/ or glycated haemoglobin, and original research. Exclusion criteria: literature is a book, and the results of a seminar or conference. Literature is then selected extraction and synthesis of data.

Results: Based on the 3 literature analysis, smartphone usage gave a positive effect on blood glucose and glycated haemoglobin, which can help lower blood glucose and glycated haemoglobin from bad category to moderate category. The effect is due to the presence of independent education, feedback and monitor services in smartphone applications.

Conclusion: The use of smartphones affects blood glucose levels and glycated haemoglobin. The smartphone app provides independent educational, feedback and monitor services that increase the patient's knowledge and awareness in controlling blood glucose.

Keyword: Blood Glucose, Glycated Haemoglobin, Smartphone, Type 2 Diabetes Mellitus