

# Model Kombinasi Prototipe Deteksi Dini SenDiKa dan Pendidikan kesehatan untuk Meningkatkan Self-Management dalam upaya Mencegah Stroke Iskemik Berulang = A Combination Model of Early Detection SenDiKa Prototype and Health Education to improve Self-Management in order to Prevent Recurrent Ischemic Stroke

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## Abstrak

Latarbelakang: Kejadian stroke iskemik termasuk stroke berulang terus meningkat di negara maju maupun negara berkembang termasuk Indonesia. Stroke berulang berdampak terhadap peningkatan morbiditas, mortalitas dan ketidakmampuan fungsional. Kemampuan self-management adalah salah satu indikator untuk memprediksi terjadinya stroke berulang. Pengamatan lapangan menunjukkan belum ada alat yang dapat meningkatkan kewaspadaan diri penyintas. Oleh karena itu perlu dikembangkan alat deteksi dini untuk menumbuhkan selfawareness dan motivasi pasien yang berdampak pada peningkatan kemampuan self-management.

Tujuan: penelitian ini bertujuan membentuk model pengelolaan perawatan diri menggunakan kombinasi prototipe deteksi dini SenDiKa dan Pendidikan kesehatan untuk meningkatkan kemampuan manajemen diri dalam upaya mencegah stroke iskemik berulang serta membuktikan keefektifannya terhadap self-management pasien stroke iskemik.

Metodologi: Penelitian ini terdiri dari dua tahap; tahap pertama mengembangkan alat sensor digital yang dinamai SenDiKa (Sensor Digital Kariasa) menggunakan desain cross-sectional dan menyusun pendidikan kesehatan manajemen diri dan tahap kedua menguji alat tersebut menggunakan desain quasi-eksperimen pre-post-test control group melibatkan 44 sampel pasien pasca stroke iskemik yang diambil melalui teknik consecutive sampling. Subyek terdiri dari kelompok intervensi dan kontrol dengan lama intervensi 12 minggu.

Hasil: Penelitian ini menunjukkan adanya perbedaan signifikan antara kedua kelompok dengan p-value = 0,000 dimana kelompok intervensi yang menggunakan alat deteksi dini yang dikombinasi dengan pendidikan kesehatan memiliki perubahan kearah yang baik terhadap self-management dibandingkan kelompok kontrol. Hasil ini menunjukkan penggunaan kombinasi alat deteksi dini Prototipe SenDiKa dan pendidikan kesehatan dapat berfungsi dengan baik serta memberi efek positif terhadap peningkatan self-management pasien pasca stroke.

Simpulan dan Saran Utama: Model kombinasi prototipe SenDiKa dan Pendidikan Kesehatan manajemen diri dapat digunakan untuk mengidentifikasi beberapa indikator utama yaitu; tekanan darah, gula darah dan kolesterol oleh pasien secara mandiri. Rekomendasi lain adalah Menyempurnakan Prototipe SenDiKa sehingga dapat mengeluarkan angka riil dari setiap faktor risiko pasien, kalkulasi dari akumulasi besarnya faktor risiko dan membuat aplikasi Pendidikan Kesehatan Manajemen Diri kedalam sistem android sehingga responden dapat langsung mempelajari manajemen diri yang benar dan sesuai. Prototipe ini dibuat agar teruji kebermanfaatannya, mudah digunakan, mudah didapat dan murah harganya.

....Background: The incident rate of Ischemic stroke has been rising either in developed or developing countries, including Indonesia. In addition to physical and functional disability caused by stroke attack,

recurrent stroke attack becomes another concern which can cause problems in economic and psychosocial aspect. Recurrent stroke attacks are associated with increased morbidity, mortality, and functional disability. Patient's Self-Management ability is one of the indicators to predict the occurrence of recurrent ischemic stroke. Based on researchers' observations, there is no tool available to improve awareness of the stroke survivors to prevent recurrent stroke attacks. Therefore, it is necessary to develop an early detection tool to foster patients' self-awareness and motivation which have an impact on improving patients' self-management abilities.

**Purpose:** This study aim to develop a model that combining a prototype of early detection SenDiKa and health education to improve self-management ability to prevent recurrent stroke attacks and to measure its effectiveness.

**Method:** This study consists of two stages; the first stage is to develop a device called SenDiKa (Kariasa Digital Sensor) using a cross-sectional design combined with providing health education. The second stage is to test the device to patients using a quasi-experimental design involving 44 post-ischemic stroke patients taken through consecutive sampling technique. The subjects were divided into two groups, the intervention group, which will be using SenDiKa combined with health education, and the control group. They will be provided with intervention and be observed for 12 weeks.

**Results:** This study shows a significant difference between the two groups with  $pvalue= 0.0000$  where the intervention group had a better self-management abilities compared to the control group. The combination of SenDiKa, a prototype of early self-detection tool and health education on self-management, has a positive effect on improving the stroke survivor's self-management abilities in order to prevent recurrent stroke attacks.

**Conclusion and Recommendations:** SenDiKa prototype, combined with health education of self-management, can be used to identify several ischemic stroke risk factors: blood pressure, blood sugar, and cholesterol. Knowing the value of this examination is expected to improve the patients' self-awareness and motivation which hopefully will encourage the patients to improve their self-management abilities in preventing recurrent stroke attacks. Another recommendation is to continue the development of this combination between early detection prototype devices with health education so that everyone can experience its benefits, especially for stroke survivors.