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| **Title of Research Presentation** (Sentence case)  Using Intervention Mapping to develop a mobile health application for prevention of metabolic syndrome for South Korean adults |
| **Maximum 2500 characters (including spaces but excluding title)**  **Background/Objectives**  Intervention Mapping is a process of development of health education program based on a theory. It has been used to plan health intervention programs steadily. However, there was a lack of prior research on metabolic syndrome mediation and the application of mobile health applications. Therefore, we would like to develop a mobile health applications for a health intervention program to prevent metabolic syndrome for South Korean adults using Intervention Mapping.  **Methods**  We applied 6 steps of Intervention Mapping sequentially to design development of a mobile health application. Also, transtheoretical model's concepts such as stages of change, decisional balance, and self-efficacy were applied to develop contents of mobile health application. In the developing process, 4 professors from the department of health behavior intervention, nutritional science and food management, and computer science and engineering and 4 researchers participated.  **Results**  We identified the need of multiple behavioral intervention programs for the prevention of metabolic syndrome. Physical activity, diet, drinking and smoking were selected for target behaviors(Step 1). We set performance objectives, determinants, and change objectives and arranged them in a matrix(Step 2). Based on the theoretical model, appropriate methods and strategies were selected to improve stages of change(Step 3). We developed contents for mobile health application with some features of personalization, data storage, and self-monitoring. Mobile health application can make users input their physiological and behavioral factors and get recommendations tailored to their results(Step 4). We planned for adoption and implementation of mobile health application(Step 5), and also made a plan to evaluate the effectiveness(Step 6).  **Discussion**  Intervention Mapping is effective to systematically design an intervention for prevention of metabolic syndrome. Developed mobile health application will be applied to South Korean adults to prevent metabolic syndrome regardless of time and space. In the future, the use of Intervention Mapping should be activated for the planning of high quality metabolic syndrome program and development of mobile health applications.  **Keywords**  Intervention Mapping, health intervention, mobile health application, metabolic syndrome |