

Abstract

The increasing number of adolescents with type-2 diabetes mellitus (DM) is of particular concern today, triggered by sedentary lifestyles where unhealthy lifestyles such as lack of physical activity, unbalanced food consumption, and high sugar content in food and beverage products, are also related to the conveniences available due to technology. While current government efforts to reduce the spike in diabetes mellitus in adolescents by increasing the excise tax price of foods and drinks high in sugar, it is not effective enough to reduce the prevalence of diabetes mellitus and increase awareness of adolescents. And therefore this research seeks to provide information to adolescents regarding the importance of maintaining a healthy lifestyle in order to stop the increase in diabetes mellitus sufferers. In this research, the method used is the Design Thinking approach, which includes the empathy, define, ideate, prototype and test stages. Data was collected through in-depth interviews with adolescents, diabetes survivors, and health workers, as well as observation of eating behavior and lifestyle of adolescents, and distribution of questionnaires. The results showed that the mobile-based application approach can increase adolescents' awareness of the risks of diabetes mellitus and help them understand the risks from the information available so that they can adopt a healthier lifestyle. Thus, this application has great potential to be used as an intervention tool in the prevention of diabetes in adolescents.

Keywords: *Diabetes Mellitus, Adolescent, Mobile Application*