Abstract

Diabetes is an endocrine disorder that occurs when the pancreas is either not producing enough insulin for body or the cells are not responding to secreted insulin. The prolonged hyperglycemia will predispose individuals with type 2 diabetes mellitus to early development of diabetes-associated complications such as lower limb amputation, nephropathy, retinopathy, neuropathy, and cardiovascular sequela. Seven percent of the population of Prince George's County, Maryland has been diagnosed with diabetes, with most of these patients suffering from one or more diabetes-related complications attributed to lack of self-care management activities. This led to a quality improvement project to study the effects of a mobile self-management application on enhancing self-care management to keep plasma glucose level under control. The Chronic Care Model guided the implementation of this project. A quantitative methodology with a pre-test, post-test design was used. This project enrolled participants between the ages of 18 to 65 years receiving care in a wellness clinic located at Prince George County, Maryland. Statistical Package for Social Sciences (SPSS) version 25.0 was used to determine relation between use of the Glucose Buddy Pro mobile self-management app and participant self-care knowledge. The project found a statistically significant association between use of the app and participant knowledge.

Keywords: *Type 2 diabetes mellitus, Plasma glucose level, Knowledge for self-care, mobile self-App*