Analysis of the related factors with a two-stage model of using a personal mobile health assistant for type-2 diabetic patients

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Abstract

Statement of the Problem: Evidence from empirical data has demonstrated that self-management may achieve maximum effectiveness on the outcomes of patients with chronic illness. Mobile technologies are the innovation strategy to change people's health behaviors for health self-management. The predictors of user acceptance of information technology for patients in Asia, particularly Taiwan, are unknown. The purpose of this study was to investigate the related factors with a two-stage model on using a personal mobile health assistant for type-2 diabetic patients.

Methodology & Theoretical Orientation: This study was conducted in an ambulatory setting of two hospitals in northern Taiwan from September 2017 to March 2018. A United Theory of Acceptance and Use of Technology (UTAUT) framework was utilized. Questionnaires were given to type-2 diabetic patients at two different points of time: After initial training (T_1) and three months after implementation (T_2). We also count the number of usages for user behaviors.

Findings: Perceived usefulness and satisfaction has had significantly positive effect on usage intention in the first stage (account for 66% of the total variance), but only perceived usefulness has a significant positive effect on actual usage stage (mere 14% of the total variance). Usage intention was the low correlate of user behavior in two stages ($r=0.09$, $r=0.42$, respectively).

Conclusion & Significance: Perceived usefulness influences participants' continuous usage intention. Usage intention has a small effect on user behavior in our study. The predictors and results of acceptance and use of technology for disease self-management provide administrators with information to develop strategies to enhance the acceptance and user behaviors for patients.

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