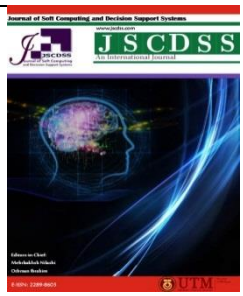
An International Journal
JSCDSS
http://www.jscdss.com
Vol.6 No.2 April 2019: 6-11
Article history:
Accepted 09 March 2019
Published online 09 March 2019

Journal of Soft Computing and Decision Support Systems



E-ISSN: 2289-8603

Antecedents of Consumers' Intention to Adopt Wearable Healthcare Devices

Shahla Asadi [a,*], Mitra Safaei [b], Elaheh Yadegaridehkordi [c], Mehrbakhsh Nilashi [d]

[a] Department of Software Engineering & Information System, Faculty of Computer Science & Information Technology, Universiti Putra Malaysia
[b] Fakultät Electronic und Informatik, Gottfried Wilhelm Leibniz Universität Hannover
[c] Department of Information Systems, Faculty of Computer Science & Information Technology, University of Malaya, 50603 Kuala Lumpur, Malaysia
[d] School of Computing, Faculty of Engineering, Universiti Teknologi Malaysia, 81310 UTM Johor Bahru, Johor, Malaysia

*** Corresponding author email address**: asadi.shahla2003@gmail.com

Abstract

Wearable technologies are considered as the possibility of enhancing healthcare productivity and decrease healthcare charge. Regardless of the significance of this technology, inadequate studies have focused on the antecedents of factors influencing consumers' intention for the adoption of wearable devices. This study aimed to determine the significant factors which have an influence on consumers' intention for the adoption of wearable healthcare devices. The current study adopts a Technology Acceptance Model (TAM) to explore an individual's intention for wearable health technology adoption. Data for this study was obtained from 176 Malaysian researchers. The Structural Equation Model (SEM) was performed for testing the proposed research model. The obtained results from SEM indicated that perceived usefulness, perceived ease of use, initial trust and functionality have a statistically significant influence on consumers 'intention for adoption of wearable healthcare devices. The results of this study will aid the manufacturers and providers to how increase the use of wearable healthcare devices in the healthcare.

Keywords: Wearable device, TAM, Adoption factors, Healthcare, Customer perspectives.

1. Introduction

Currently, wearable devices are considered as the heart of every debate related to the Internet of Things (IoT). During the recent decade, wearable technologies have interested attention of the industry as well as academic society and have currently been very popular (Haghi et al., 2017). The relevant definition for wearable healthcare device can be as follows. "a device that is autonomous, that is non-invasive, and that performs a specific medical function such as monitoring or support over a prolonged period of time" (Fotiadis, Glaros and Likas, 2006).

Consumers by adopting the appropriate fitness wearable technology for instance "Jawbone UP" and "Fitbit Flex" can monitor easily their health circumstances like "sleep", "calories burned", "heart rate", and "distance traveled" in real time (Asadi *et al.*, 2019). By collecting data from the wearable healthcare devices, the consumers can use all the information which acquire by these devices to manage the health situation through smartphones or other mobile applications. In addition, the conducted physical data via wearable devices can transfer to the hospital for more monitoring and accelerate healthcare works.

In addition, improvement of the health situation by the application of wearable devices is a complicated procedure. Firstly, consumers should have enough motivation and tendency to buy a device. Secondly, consumers should encourage wearing continuously the device and charging regularly devices. Lastly, the wearable devices should precisely record all the information and collected data must give correct feedback for improving the behavior of consumers. These consistently intertwined features influence users' acceptance of wearable technology (Wen, Zhang and Lei, 2017).

In the study conducted by Roman et al. (2015), which reported that wearable healthcare devices have contributed to saving $305 billion medical expense in the USA alone. Thus, the adoption of these technology ("wearable health care devices") is essential for consumers to save their medical expense. Despite the considerable benefits and functionality of the wearable healthcare devices, there is the inadequate study of the exploring the consumers'