

USERS' BEHAVIOURAL INTENTION MODEL OF USING SMART
WELLNESS WEARABLES IN MALAYSIA

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DEDICATION

Specially Dedicated to...

My Parents

My Lovely Sisters and Brother

*My love to you will always remain and thank you for your
Support, Guidance, Patience, Joyfulness to make this experience complete.*

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ABSTRACT

Internet of Things (IoT) has attracted policymakers and academics' attention as the next generation of digital revolution. In many developing countries, including Malaysia, rapid social and economic growth has spurred the emergence of chronic diseases as a significant public health challenge. Practitioners and researchers believe that physical inactivity and an unhealthy lifestyle will lead to these diseases. Nowadays, smart wellness wearables are considered a hot topic in the healthcare context to encourage individuals to have a healthier lifestyle and be responsible for their own health. Despite the important role of smart wearables in healthcare, limited number of researches have investigated some critical factors or empirically examined a limited number of important factors from the technology perspective. Therefore, a comprehensive model to explain users' intention to use smart wellness wearables is strongly needed. Accordingly, to identify potential factors that influence individuals' intention toward smart wellness wearables usage, a comprehensive and systematic literature review was conducted. The research developed a unified model based on Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) and Value-based Adoption Model (VAM) including extra factors of perceived health increase and perceived trust. A quantitative approach was applied to examine fifteen hypotheses of the proposed model by surveying 254 smart wellness wearables' users in Malaysia. The survey data were analyzed using Partial Least Square Structural Equation Modeling (PLS-SEM) technique. The results indicated that perceived enjoyment, effort expectancy, performance expectancy, and perceived fee had a significant influence on perceived value, while perceived privacy did not have any significant impact on perceived value. Moreover, the results revealed that effort expectancy, performance expectancy, perceived enjoyment, perceived fee, perceived health increase, perceived trust, social influence, and perceived value had significant effects on intention to use smart wellness wearable devices while facilitating conditions and intention to use did not have any significant relationship. Theoretically, these results have enhanced the understanding of multiple factors that influence behavioural intention for using smart wellness wearables. The research findings contribute to the Information Systems research field by providing a holistic research model for researchers and practitioners for increasing users' intention to use smart wellness wearables.

ABSTRAK

Objek Rangkaian Internet (IoT) telah menyerap perhatian penggubal dasar dan ahli akademik sebagai generasi revolusi digital. Di kebanyakan negara membangun, termasuk Malaysia, pertumbuhan sosial dan ekonomi yang pesat telah mendorong kemunculan penyakit kronik sebagai satu cabaran utama kesihatan awam. Pengamal dan penyelidik percaya bahawa ketiadaan aktiviti fizikal dan gaya hidup yang tidak sihat akan membawa kepada penyakit ini. Pada masa kini, peranti kesihatan boleh pakai pintar dianggap sebagai suatu topik yang hangat dalam konteks penjagaan kesihatan bagi menggalakkan individu untuk memiliki gaya hidup yang sihat dan bertanggungjawab terhadap kesihatan mereka sendiri. Walaupun peranan peranti boleh pakai penting dalam penjagaan kesihatan, bilangan kajian yang terhad telah mengkaji beberapa faktor kritikal atau secara empirik mengkaji beberapa faktor yang penting dari perspektif teknologi. Oleh itu, satu model komprehensif untuk menjelaskan tujuan pengguna untuk menggunakan peranti kesihatan boleh pakai pintar sangat diperlukan. Sehubungan itu, untuk mengenal pasti faktor-faktor yang berpotensi yang mempengaruhi tujuan individu terhadap penggunaan peranti kesihatan boleh pakai, sorotan literatur yang komprehensif dan sistematik telah dijalankan. Tujuan kajian ini adalah untuk mencadangkan model bersepadu berasaskan Teori Bersepadu Penerimaan dan Penggunaan Teknologi 2 (UTAUT2) dan Model Adopsi Berasaskan Nilai (VAM) termasuk faktor tambahan iaitu persepsi peningkatan kesihatan dan persepsi kepercayaan. Pendekatan kuantitatif digunakan untuk mengkaji lima belas hipotesis model yang dicadangkan dengan menyoal selidik 254 pengguna peranti kesihatan boleh pakai di Malaysia. Data soal selidik telah dianalisis menggunakan teknik Kuasa dua Terkecil Separa Pemodelan Persamaan Struktur (PLS-SEM). Hasilnya menunjukkan bahawa persepsi keseronokan, jangkaan usaha, jangkaan prestasi, dan persepsi harga mempunyai pengaruh yang signifikan ke atas persepsi nilai, manakala persepsi privasi dilihat tidak mempunyai kesan yang signifikan ke atas persepsi nilai. Selain itu, hasil kajian menunjukkan bahawa jangkaan usaha, jangkaan prestasi, persepsi keseronokan, persepsi harga, persepsi peningkatan kesihatan, persepsi kepercayaan, pengaruh sosial dan persepsi nilai mempunyai kesan yang signifikan ke atas tujuan penggunaan peranti kesihatan boleh pakai pintar manakala keadaan memudahkan dan tujuan penggunaan tidak mempunyai hubungan yang signifikan. Secara teorinya, hasil ini telah meningkatkan pemahaman tentang pelbagai faktor yang mempengaruhi tujuan perlakuan bagi penggunaan peranti kesihatan boleh pakai pintar. Hasil kajian ini menyumbang kepada bidang Sistem Maklumat dengan menyediakan model kajian yang holistik bagi para penyelidik dan pengamal untuk meningkatkan keinginan pengguna untuk menggunakan peranti kesihatan boleh pakai.

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LIST OF ABBREVIATIONS

3D	-	Three-dimensional
AR	-	Augmented Reality
AVE	-	Average Variance Extracted
CA	-	Cronbach's Alpha
CAGR	-	Compound Annual Growth Rate
CET	-	Cognitive Evaluation Theory
CR	-	Composite Reliability
CVI	-	Content Validity Index
DOI	-	Diffusion of Innovation
HTMT	-	Heterotrait-monotrait
ICT	-	Information and Communications Technology
I-CVI	-	Item-level Content Validity Index
IDC	-	International Data Corporation
IoT	-	Internet of Things
IS	-	Information Systems
IT	-	Information Technology
ITU	-	International Telecommunications Union
MIT	-	Massachusetts Institute of Technology
MM	-	Motivational Model
MPCU	-	Model of PC Utilization
NFC	-	Near-Field Communication
PCT	-	Privacy Calculus Theory
PLS-SEM	-	Partial Least Square Structural Equation Modeling
QA	-	Quality Assessment
SCT	-	Social Cognitive Theory
S-CVI	-	Scale-level Content Validity Index
SLR	-	Systematic Literature Review
TAM	-	Technology Acceptance Model
TPB	-	Theory of Planned Behavior
TRA	-	Theory of Reasoned Action

- TTFT - Task-Technology Fit Theory
- UTAUT - Unified Theory of Acceptance and Use of Technology
- UTM - Universiti Teknologi Malaysia
- VAM - Value-based Adoption Model
- VR - Virtual Reality

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CHAPTER 1

INTRODUCTION

1.1 Overview

In the digital age, one of the most potentially far-reaching Information Technology revolutions is the Internet of Things (IoT). IoT is an ever-evolving concept which defined as an effective and integrated technology that all potential objects are equipped with unique identifiers such as sensors to enable the ability to collect data from the surroundings and transfer it across a network without human involvements. IoT has been obtaining attentions from many industries, especially healthcare. Within the context of IoT, smart wearables are introduced as the next generation of ubiquitous technologies and market demands after smartphones (E. Park, Kim, & Kwon, 2016). Essentially, smart wearables are devices that are equipped by wireless sensors and embedded in garments or accessories and could be worn by users persistently. Smart wearables have become one of the fastest growing segments and the most popular user devices in the market of smart devices. Therefore, this technology has gained a considerable attention from Information Systems academics and business practitioners. Additionally, these devices are known as smart wearables, wearable technology or wearable devices. The emergence of smart wearables has provided the ability to access the information anywhere and anytime (K. J. Kim & Shin, 2015). Indeed, smart wearables are designed to measure users' personal information such as vital signs, locations, environments, and movements (Cheng & Mitomo, 2017).

Nowadays, smart wearables are provided for being used in various end-user sectors such as lifestyle computing, medicine, sports, and personal safety (Cheng & Mitomo, 2017). The development of smart wearables proposed a platform to create a personalised wellness monitoring system, with the goal of tracking and recording

individuals' chronic and acute events (Aliverti, 2017). In this context, smart wellness wearables should be able to provide real-time vital signs feedback.

A sedentary and inactive lifestyle may lead to the prevalence of chronic diseases such as obesity and diabetes. Academic researchers believe that smart wellness wearable devices have an impressive effect on users' health principles. According to the various and useful features of smart wellness wearable devices, such as sleep monitoring patterns and caloric intake measurement, people may attain a better understanding of their physical activity and become more motivated to keep their body healthier (Prayoga & Abraham, 2016). Thomas William Miller (2017) examined the effectiveness of using a fitness wearable device and the consequences of monitoring the individuals physical activities. The findings of his research confirmed that wearing a fitness wearable device was helpful and had a positive influence on the behaviour of an overweight patient with type 2 diabetes.

Recently, user wellness wearables such as activity trackers and smart sport watches have gained a lot of market attention. According to International Data Corporation (IDC, 2018), the worldwide shipments of smart wearables will reach 124.9 million devices by the end of 2018 (8.2% growth compared to 2017). As reported by Statista (2018), the number of connected wearables will jump up to more than 830 million units in 2020. Furthermore, it is predicted that the wearables market will pass 50 billion dollars annually by 2027 (Research and Markets, 2017). These statistics confirm the rapid growth of smart wearables in the coming years and show the needs for more investigation on users' need and preferences of using this technology.

1.2 Background of the Problem

The recent rise of innovative technologies such as smart wellness wearables for improving the public health has earned a lot of interest among practitioners and researchers. Smart wellness wearable technology is designed to measure individuals'

biological signals such as heart rate, blood pressure, and body temperature. Nowadays, this technology has become highly popular and extremely pervasive. One of the underlying reason for emerging these devices is to generate a cultural shift to assist ordinary folks to collect, quantify, and perceive their own health-related data in everyday life (Yao & Ho, 2017).

According to a study conducted in Malaysia (Mohamed, Yap, Norris, & Aagaard-Hansen, 2015), obesity increases the incidence of cardiovascular diseases, type 2 diabetes, and some type of cancers among adults. Thus, obesity has become a great burden on healthcare cost as well as reducing the standards of life. Many researchers believe that smart wellness wearable technology can be served as a motivational tool to encourage individuals to be more active (Cadmus-Bertram, Marcus, Patterson, Parker, & Morey, 2015; Chung, Skinner, Hasty, & Perrin, 2017; Hickey & Freedson, 2016; Naslund et al., 2016; J. B. Wang et al., 2015). Therefore, using smart wellness wearables can be a solution for enhancing the individuals' health and well-being (Aliverti, 2017). In line with this claim, Swan (2009) indicated that smart wellness wearables can improve the users' self-awareness about their lifestyle habits and affect positively on their general health and well-being.

In addition, Aliverti (2017) stated that smart wellness wearable technology provides an increasing number of solutions for independent living for the elderly and a healthier lifestyle for individuals who inclined to monitor their own health. He claimed that smart wellness wearable devices can be employed to monitor and record individuals' health conditions in cities and rural areas which caused diminishing the healthcare providers' workload, raising the efficiency, decreasing healthcare services costs and enhancing individuals' comfort (Q. Wu, Sum, & Nathan-roberts, 2016). Hence, with the possibility of changing health behaviour through these devices, the individuals will be capable of being engaged in their own health and taking the responsibility of their own wellness (Yao & Ho, 2017). Consequently, individual and general health in society will be improved.

IDC (2015) foresees more vendors appearing in the smart wearables market of Malaysia, both local and foreign as vendors try to further leverage on the users demand. Moreover, the Malaysian government will continue to play a big role with its various initiatives of providing incentives for the local market. However, although reports express the increased demand for smart wearables in the coming years, the current adoption and diffusion of smart wellness wearable technologies are still quite low (Chuah et al., 2016; Dehghani, 2018; Sultan, 2015). IDC (2015) stated that while smart wearables are commonly available, these products are not widely used in Malaysia as there are doubts over the value they bring. Based on the number of challenges that need to overcome, IDC (2015) estimated that early adopters of these technologies remain the only adopters for the time being in Malaysia.

Malaysia has a new plan for healthcare that will give citizens access to their health data online and share vital statistics from smart wearable devices with their doctors. The remote monitoring is the first step towards an ambitious plan to send information from patients' wearables to their doctors. Moreover, Malaysia has launched a national IoT plan, and one of the first government pilots will be in healthcare. The government wants to use smart wellness wearables to measure vital data like heartbeat, amount of exercise and number of calories (Medha Basu, 2016).

On the other hand, it is estimated that the digital health market will grow exponentially, fuelled by innovations in Telehealth, Telemedicine, Smart wearables, and other transformative technologies. It is therefore imperative for healthcare services groups to focus on the adoption of these innovations, especially smart wearables which can enhance the provision of healthcare services to Malaysian patients, and improve their wellbeing (KPJ Healthcare, 2018). Since one of the main disappointment for the smart wearables industry is the slow rate of users' adoption, acceptance, and usage intention (Dehghani, 2018), thus it is necessary to investigate the behavioral intention of users towards using smart wellness wearables in Malaysia.

Due to the fast growth of smart products in retailing, specifically smart wellness wearables, it is critical for academic researchers as well as retailers to understand user responses to these technologies (H. Kim, Lee, Mun, & Johnson, 2016). Consequently, investigating of the drivers that have significant influence on acceptance and intention to use smart wellness wearable devices can have a positive effect on society and policy-making issues (Canhoto & Arp, 2017). In fact, understanding the influential factors behind the adoption of new innovation is a critical issue for designers and developers when developing successful products and to increase the speed of adoption. Consequently, it is important to explore and determine the particular requirements and preferences of smart wellness wearables' users in various countries (Tsao, Haferkamp, & Ma, 2016).

Besides, one of the risks that firms may encounter is that people refuse to use these smart wearables (Mani & Chouk, 2017). Almost half of the smart wearables' users would abandon their devices during the first six months (Canhoto & Arp, 2017; D. Levy, 2014). Moreover, users may not gain the promised benefits of smart wellness wearable devices in terms of health and fitness issues (Canhoto & Arp, 2017). Furthermore, attracting and motivating users to continue using their smart wellness wearables is also an important challenge for smart wearables providers.

According to the literature, most of the previous studies on smart wearables have been more 'technology driven' than 'user driven' (J. Choi & Kim, 2016; Dehghani, 2018). In other words, previous researchers have mainly focused on technological aspects of smart wearables (Chan, Estève, Fourniols, Escriba, & Campo, 2012; Gillinov et al., 2017; K. J. Kim, 2017; Kutzin, Milligan, & Chawla, 2017). There are not sufficient empirical researches that investigated the successful factors and determinants of smart technology adoption, particularly smart wellness wearables from the user's perspective (Tsao et al., 2016). However, this technology is in the early stages of development and there is an ambiguous knowledge about the users' needs (Cecchinato, Cox, & Bird, 2015; J. Choi & Kim, 2016). Thus, there is a strong need for realizing the actual users' perceptions and intentions toward using smart wellness wearable technology. Indeed, it is crucial to consider the human

condition when designing smart wellness wearables. In other words, studying human behavioural conditions will provide more useful and effective solutions (Weinberg, Milne, Andonova, & Hajjat, 2015).

In addition, most researches on users' behavioural acceptance of smart wearables have examined a limited number of critical factors from the technological perspective (Claes, Devriendt, Tournoy, & Milisen, 2015; Dehghani, 2018; Fraile, Bajo, Corchado, & Abraham, 2010; Steele, Lo, Secombe, & Wong, 2009). For example, Ki Joon Kim (2017) examined the effect of screen shape and size of smartwatches on users' acceptance behaviour. On the other hand, most previous attempts focused on expert users (e.g. health professionals) rather than the general public, thus more research is needed to examine the behavioural intention of actual users of smart wellness wearables (Canhoto & Arp, 2017; Groopman, 2015). To fill these gaps, a unified and comprehensive framework is needed to explain the behavioral intention of users toward using smart wearable devices more clearly (Dehghani, 2018; Y. Gao, Li, & Luo, 2015).

Technology adoption is a process starting with the user becoming aware of the technology and ending with the user accepting the technology and making full use of it (Renaud & Van Biljon, 2008). According to Taherdoost (2018), user acceptance and confidence are crucial for the further development of any new technology. Technology adoption and acceptance models contribute towards anticipating future needs in a complex and ever-evolving market scenario (Renaud & Van Biljon, 2008). A number of models have been developed to explain user adoption of new technologies and these models introduce factors that can affect the user acceptance such as Technology Acceptance Model (TAM) (F. D. Davis, 1986) and Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, Davis, & Davis, 2003). However, one of the limitations of these models is the omission of a crucial trust-related factor in the context of wireless technologies (Alghamdi & Beloff, 2014; W. W. Wu, 2011). Trust-based perceptions play an essential role in the adoption and acceptance of new IT-based services (Carter & Belanger, 2005; Thompson S. H. Teo, Srivastava, & Jiang, 2008). In line with this,

many studies indicated that trust is one of the crucial determinants of individuals' intention to use smart wearable devices (Gribel, Regier, & Stengel, 2016; He Li, Wu, Gao, & Shi, 2016; Potnis, Demissie, & Deosthali, 2017).

Nevertheless, academic researchers claimed that smart wellness wearable devices have a positive influence on regulating exercise and sport, improving performance, and making the training more efficient (C. H. Ernst, Rheingans, & Cikit, 2016; Seiler & Hüttermann, 2015) and as a consequence have positive effect on the individuals' health (C. H. Ernst et al., 2016; Lamb, Roberts, & Brodie, 1990). However, there is not enough research that explored the health-related factors of smart wellness wearables usage (C. H. Ernst et al., 2016). In addition, smart wellness wearable devices have some obstacles that attained a considerable concern among academics, developers, and users such as privacy concerns and high prices (Arias, Wurm, Hoang, & Jin, 2015; Wright & Keith, 2014; H. Yang, Yu, Zo, & Choi, 2016), which are not considered in the IS acceptance theories such as TAM and UTAUT.

Thus, there is a need to consider trust-based factors and privacy concern as well as price value and health increase perception in a unified model for examining the user's intention to use smart wellness wearables.

1.3 Problem Statement and Research Questions

Based on the arguments presented above, smart wellness wearable technology is in the very early stage of market diffusion and the research studies are still emerging. Furthermore, there is very little knowledge about the smart wellness wearables' actual users behavioral intention as well as their preferences and needs (Cecchinato et al., 2015; J. Choi & Kim, 2016; Dehghani, 2018). As discussed in section 1.2, previous studies are mostly focused on smart wearables from the technology perspectives, while the studies that tackle the users' behavior aspects of smart wellness wearables are still limited (Dehghani, 2018). Hence, an investigation

for realizing the potential and actual users' intention and behavior is strongly required (J. Choi & Kim, 2016; Dehghani, 2018). Moreover, fundamental theories such as TAM and UTAUT did not consider perceived trust, privacy concerns, price value, and perceived health increase which are the crucial factors in the context of smart wellness technologies (Alghamdi & Beloff, 2014; H. Yang et al., 2016). Besides, previous studies did not provide a comprehensive model to explain potential factors that influence the behavioral intention of users toward using smart wellness wearable devices. Consequently, based on the preceding discussions, the main research problem of this study is that *current smart wearables studies still focus on the technological aspects of wearables and neglecting the behavioral intention of users toward using smart wellness wearables.*

To address the above mentioned problem, the main research question for this study is: "How can smart wellness wearables be used by the general public in Malaysia?". Based on the mentioned basic research question, the following sub-questions can be derived:

- 1) What are the potential factors that influence the users' intention of using smart wellness wearable technologies?
- 2) What is the appropriate model for the users' intention of using smart wellness wearable technologies?
- 3) What are the most important factors in the proposed model?

1.4 Research Objectives

As a reflection of the problem statement and the research questions, the overall objective of this study is to reveal the most significant factors that influence Malaysian people behavioral intention toward using smart wellness wearables. Hence, the following objectives will be accomplished:

- 1) To identify the potential factors that influence the users' intention of using smart wellness wearable technologies.
- 2) To develop and validate a model for the users' intention of using the smart wellness wearables.
- 3) To investigate the most important factors in the proposed model.

1.5 Scopes of the Research

This study mainly focuses on the intention of users toward using smart wellness wearables. Therefore, the units of analysis are the individuals. As noted before, IDC (2015) indicated that smart wearables are not widely used in Malaysia as there are doubts over the value they bring. Hence, this study tries to find out the influential factors that impact on the Malaysian people behavior to use these devices. Therefore, the general public of Malaysia who own at least one smart wellness wearable device and have the experience of using these devices are the target population for this study. The medically oriented wearable devices in healthcare domain are commonly used to deliver real-time feedback of individuals' health to medical professionals. Researchers believe that this is a promising area of research that need more investigations in the future (Ananthanarayan & Siek, 2012). Accordingly, this study focuses on smart wellness wearable devices for monitoring physical activities which are more user-centred and fit in individuals' daily life. The other key reason for selecting smart wellness wearables is that these devices are becoming increasingly popular among the general public (K. J. Kim & Shin, 2015). Therefore, it is quite easier for participants to answer the questions on their perceptions of smart wellness wearables in comparison with theirs of other less popular wearables, such as smart medically oriented wearable devices (Mani & Chouk, 2017).

Moreover, in various developing countries, such as Malaysia, the rapid growth of social and economics has led to the emergence of chronic diseases (such as

heart attack and diabetes) as an important public health challenge. Moreover, Malaysia has witnessed a visible increase in the prevalence of obesity and overweight in the last decade (Mohamed et al., 2015). It is proved that smart wellness wearable technology has a positive influence on an individual's daily life by motivating him/her to have more physical activity and to follow a healthier lifestyle (Lim, Kim, & Choi, 2017; Prayoga & Abraham, 2016; Swan, 2009). Since the quality of general public life can be improved by smart wellness wearable devices, this study focuses on users' behavioral intention to use smart wellness wearables in Malaysia. Since, one of the key functions of smartwatches is to track the users' health (Blakeway, 2014; K. J. Kim, 2017), smart sport watches are also considered in the present study.

1.6 Significance of Study

The present study is carried out among the general public in Malaysia, which is witnessed an obvious growth in the prevalence of obesity and overweight in the last decade (Mohamed et al., 2015). This sharp increase has contributed to the parallel expansion in the prevalence of chronic diseases such as type 2 diabetes and heart attack in Malaysia. Researchers believed that one of the main reasons for the prevalence of these diseases is the low level of physical activities among Malaysians. Nevertheless, the role of smart wellness wearable technology as a motivational and preventive tool is proved by many researchers (Cadmus-Bertram et al., 2015; Chung et al., 2017; Hickey & Freedson, 2016; Naslund et al., 2016; J. B. Wang et al., 2015). Hence, the result of this study could improve the academics' understanding of the motivations and inhibitors that influence individuals' intention toward using smart wellness wearables in Malaysia. The findings of this study could also be useful for smart wellness designers and providers to understand the implications of the most important factors in increasing the willingness of individuals to use smart wellness wearables. One of the main targets of the Ministry of Health in Malaysia is to empower individuals and community to be responsible for their health (Abdullah, 2019; Ministry of Health, 2011). Smart wellness wearables is increasingly becoming widespread as a device to encourage individuals to be responsible for their health.

Accordingly, the findings of this research could assist the health policymakers to further understanding of the general public intention of using smart wellness wearables. Moreover, the outcomes of this effort may enhance the awareness of smart wellness wearables users about the benefits of using this technology in their daily life.

Furthermore, the present study contributes to the body of knowledge by developing a comprehensive model of users' behavioral intention toward using smart wellness wearables. The significance of developing a comprehensive model is to understand smart wellness wearables users' intention more deeply. The main objective of developing smart technologies is to access the information anywhere and anytime, which will caused many challenges among their users such as privacy concerns that directly affect users' trust. Therefore, understanding users' intention toward using smart wellness wearables needs a comprehensive model to consider these crucial factors. Many IS researchers have found that perceived value of the Internet services on portable and wireless devices positively impact adoption intention (C.-L. Hsu & Lin, 2018; H. W. Kim, Chan, & Gupta, 2007), specifically, in the context of smart wearables (S. C. Chen & Lin, 2015; H. Yang et al., 2016). In this regard, the Value-based Adoption Model (VAM) was established and validated in various behavioral intention scenarios. Consequently, the proposed model of this study consists of this fundamental theory and the Unified Theory of Acceptance and Used Technology 2 (UTAUT2). Most previous studies used generic adoption models and theories such as TAM and UTAUT while many researchers have criticized them for missing key factors such as trust, privacy concerns and price value (Al-momani, Mahmoud, & Sharifuddin, 2016; Alghamdi & Beloff, 2014; W. W. Wu, 2011). As a result, the present study considers these essential factors in the proposed model of this study.

1.7 Structure of the Thesis

This study is presented in six chapters that organized into three fundamental sections, namely introduction, body, and conclusion. Figure 1.1 visualizes the structure of the present thesis.

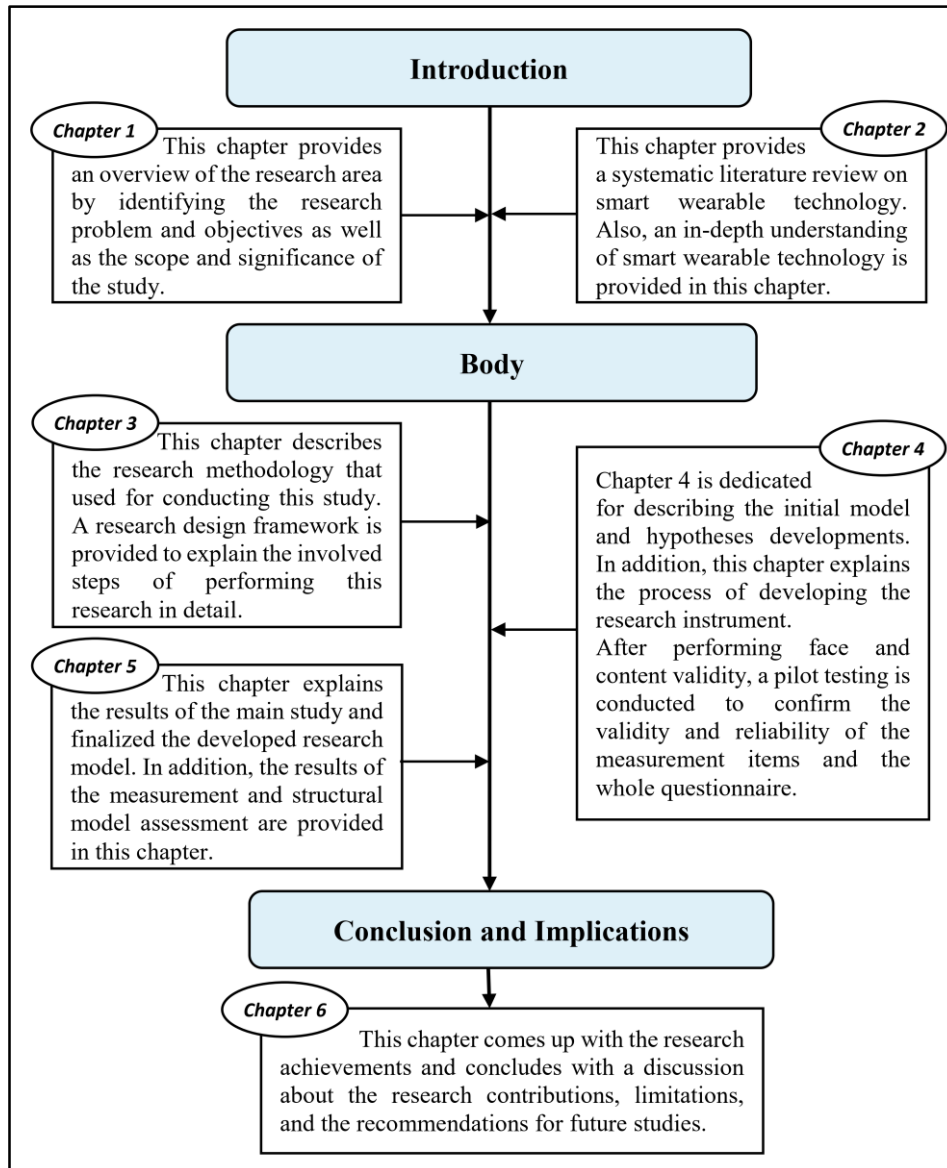


Figure 1.1 Organization of the thesis

1.8 Summary

This chapter has provided a summary of the study domain and is started with an introduction to the research topic followed by the background of the study and the problem statements. Based on the problem statement, three research questions and three research objectives were developed. Then, the general public who have the experience of using smart wellness wearables was determined as the target population and Malaysia was determined as the scope of the study. The last sections of this chapter belong to the explanation of the significance of the study and the structure of the present thesis.

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