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EXPLORING THE DETERMINANTS OF THE ACCEPTANCE OF WEARABLE FITNESS DEVICES IN MALAYSIA: A COMPARISON BETWEEN MALE AND FEMALE

Yap Way Zhe[1], Bryan Lam Jun Get[2], Sia Bee Chuan[3], Goh Hong Lip[4]
Faculty of Accountancy and Management, University Tunku Abdul Rahman
{ jack575yap@1utar.my[1], bryanjunget@1utar.my[2], siabc@utar.edu.my[3], gohhl@utar.edu.my[4] }

ABSTRACT

Wearable Fitness Devices (WFD) is a device that designed to assist their user to understand their fitness activity such as jogging, swimming, and cycling by providing feedback on the users' fitness performance. Recently, it had become one of the fastest growing segment in the wearable devices industry globally, which attracted several giant technology companies to enter the market. Meanwhile in Malaysia, the rising awareness of physical activity among the Malaysian population and government had created a great market opportunity for the WFD provider to expand their businesses in Malaysia. In fact, the revenue generated from WFD market in Malaysia is expected to have a huge growth in recent years. However, in order for the WFD provider to compete with other competitor, it is important for them to understand the determinants of the WFD acceptance in Malaysia, especially knowing the differences between different market segment such as male and female to best design their devices and marketing strategy. Hence, this study approached to investigate the acceptance of WFD of male and female in Malaysia by applying an integrated Technology Acceptance Model (TAM). In order to achieve the research objective, this study employed a quantitative survey and distributed it through social media with a convenience sampling method and received 391 responses. Results shown that the perceived usefulness, perceived ease of use, perceived privacy and personal innovativeness have significant impact on the intention to use of WFD among male and female in Malaysia.

INTRODUCTION

The market size of wearable devices is emerging globally in recent years. According to Allied Market Research, wearable technology market size is expected to grow from USD 19633 million in 2015 to USD 57653 million in 2022 with a compound growth rate (CAGR) of 16.2% (Mamtani, 2017). These devices had been implemented across various industries, for example the healthcare, fitness, and lifestyle (Mamtani, 2017). Among these devices, Wearable Fitness Devices (WFD) is expected to become the highest revenue generating segments among the global wearable technology market (Mamtani, 2017). Several giant technology companies had entered the WFD market in recent years, such as Apple, Xiaomi, Huawei, and Samsung.

There are various type of WFD such as fitness trackers, electronic activity monitors, wristband and smartwatches in todays' world (Talukder et al., 2019). The key functions and applications of these devices are to help the user to stay healthy, get active and improve their quality of life. The applications of WFD included arranging training plan, fitness activity

tracking, collect and analysis of health and fitness related data to provide feedback on the user's fitness performance (Kim & Chiu, 2019). Other than that, some of the WFD also provided extra application to help their user to stay healthy such as dietary tracker and medical check-up reminder to enhance the robustness of the devices (Talukder et al., 2019). Due to the applications of WFD are very close to people's life, WFD had become one of the most accepted wearable devices globally.

Recently, Malaysian government had paid more effort in encouraging the public to stay physically active, the government had implemented several campaigns to encourage the public to get active, such as introducing physical activity as one of the programmes component in schools, universities, communities and workplace, as well as establishing "Community Health Promotion Centres" throughout the country to provide exercise sessions and consultation to the public (Khoo et al., 2020). In fact, according to National Health and Morbidity Survey 2019 (NHMS2019), Malaysian had become more physically active compare to 10 years ago (National Institutes of Health, 2019). The increase of physical awareness among the Malaysian could potentially increase the demand of the fitness complementary goods such as WFD to keep track on their physical activity. According to Statista, (2021), the expected revenue of WFD market in Malaysia is forecasted to increase from USD107.93 million to USD195.85 million from 2021 to 2025. These data had shown that the future demand of WFD in Malaysia is increasing. However, besides the increase of demand, the competition among the market will also increase. Hence, in order for the WFD provider to survive and compete with other competitors, it is important for them to understand the driver of WFD in Malaysia to gain the market share.

WFD provider could also better strategize their marketing strategy with market segmentation. According to McDanield et al., (2011), market segment is a group of people or organization that shared with similar characteristics that causes them to have similar product needs. The technique of market segmentation could help the marketers to define customer needs and wants more precisely (McDanield et al., 2011), which further improve the sales of the product. There many market segmentation bases that is used in technology acceptance study, but gender is arguably one of the most addressed base. It is because male and female are different in term of social, behaviour and thought (Guo et al., 2015). Hence, knowing the determinants differences between two gender could also benefit the WFD provider by helping them to better design their marketing strategy.

Apparently, although WFD acceptance had been studied by other researchers, this kind of study in Malaysia is relatively low. So far, the author only be able to identify one study that had investigated the determinants of WFD acceptance in Malaysia. However, as mentioned by the author, their study does not included every potential factors that influence the acceptance of WFD in Malaysia, and they are encouraging the future studies to disclose more insight in such field (Beh et al., 2019). On the other hand, the study of them focused in Penang, Malaysia might not be able to represent the whole population. Moreover, there are limited study investigated the determinants differences between male and female regarding the acceptance of WFD in Malaysia. Hence, this study is intended to fill the addressed

literature gap by exploring the determinants of the acceptance of WMD among male and female in Malaysia.

LITERATURE REVIEW

In order to understand the previous studies that were done in this field. This study had went through four previous studies that were particularly investigated the acceptance of WFD. For instance, a study in Malaysia found that the perceived usefulness, perceived ease of use, facilitating condition and hedonic motivation are effective factors that are influencing the intention to use of WFD (Beh et al., 2019). A study in China had found that perceived usefulness, perceived ease of use, social influence, habit, innovativeness and compatibility are significantly influencing the behavioural intention to use WFD (Talukder et al., 2019). Owen et al., (2019) had found that perceived usefulness, perceived privacy and security risk, facilitating conditions and hedonic conditions were significantly influencing the behavioural intention to use WFD in Jamaica. Kim & Chiu, (2019) investigated the acceptance of WFD in Korea found that the technology readiness of a person is influencing the perception of the usefulness and ease of use of WFD, which these perception can further influence the acceptance of WFD. Also, Kim & Chiu, (2019) found that male have significant higher significant impact on perceived ease of use from negative technology readiness which indicated that male with higher technology readiness would be more likely to perceive ease when using WFD.

After reviewing several literature regarding the acceptance of WFD. There are several factors had been found significant in other countries but yet to be investigated in Malaysia such as privacy and innovativeness related factor. In this study, the author is intended to apply an integrated Technology Acceptance Model (TAM) with perceived privacy and personal innovativeness to investigate the factors influencing the intention to use of WFD among male and female in Malaysia.

TECHNOLOGY ACCEPTANCE MODEL

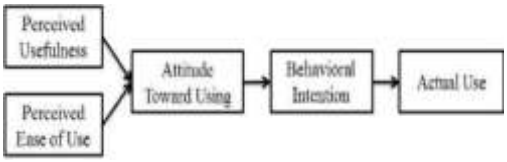

Figure 1: Technology Acceptance Model 1

Technology Acceptance Model (TAM) was selected as the theoretical foundation of this study to explore the factors influencing the acceptance of WFD among male and female in Malaysia. TAM was first introduced by Davis, (1985), he suggest that the intention to use of a new technology is mainly influence by three factors, namely perceived usefulness, perceived ease of use and attitude toward using the technology. Davis believe that the attitude of a user toward using is the key determinants of whether the user will be using or rejecting the technology and whether the user are holding a positive or negative attitude is determined by two key factors which are perceived usefulness and perceived ease of use (Marangunić & Granić, 2015). However, in his further research, Davis, (1989) had removed the attitude toward using as the key determinants of intention to use of a new technology due to it is unable fully mediate the impact of perceived usefulness and perceived ease of use toward intention to use. Hence, he suggested that perceived usefulness and perceived ease of use will have a direct impact on intention to use of a new technology, and introduced TAM 2.

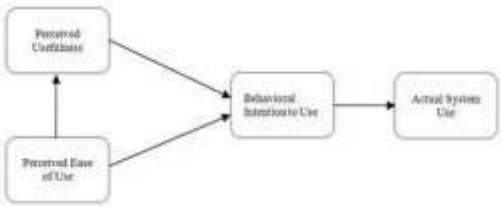

Figure 2: Technology Acceptance Model 2

After TAM 2 had been established, there are several studies argued that TAM 2 is unable to fully explain the de determinants of intention to use of a new technology (Marangunić & Granić, 2015; McFarland & Hamilton, 2006). Hence, Marangunić & Granić, (2015) indicated that there are several possible directions to extend TAM, for instance, extending TAM with the factors from related models, additional belief factors and other external factors to have a better explanation on acceptance of technology. In order to better understand the factors that are influencing the intention to use of WFD, this study is intended to extend TAM with two additional factors from other research model, namely personal innovativeness and perceived privacy.

GENDER SEGMENTATION

The definition of Gender segmentation is a market segmentation technique that categorized the potential customers based in the gender of them. Gender differences in the study of new technologies adoption had been addressed for decades (Kim & Chiu, 2019). It is because male and female are generally different in term of social, behavior and their thought (Guo et al., 2015), these differences might be resulted from their innate temperamental differences (Costa et al., 2001), personality trait (Feingold, 1994) and socialisation (Aguirre-Urreta & Marakas, 2010). A wellknown technology acceptance model, Unified Theory of Acceptance and Use of technology (UTAUT) also empirically proven the significant of the moderating effect of gender in technology acceptance (Venkatesh et al., 2003, 2012). Such differences between male and female in the study of wearable technology acceptance can also be found in the study of Kim & Chiu, (2019) and Pfeiffer et al., (2016). Hence, this study approached to develop the hypotheses based on different gender in the following section.

CONCEPTUAL FRAMEWORK PERCEIVED USEFULNESS

Perceived usefulness is defined as the degree which the person believes that using WFD will enhance his or her performance in fitness activity (Kim & Chiu, 2019). The perceived usefulness had been found significantly influencing the acceptance of several wearable devices such as WFD (Beh et al., 2019; Kim & Chiu, 2019; Owen et al., 2019; Talukder et al., 2019), wearable self-tracking devices (Pfeiffer et al., 2016), healthcare wearable devices (Asadi et al., 2019; Chau et al., 2019; Lee & Lee, 2020; Zhang et al., 2017) and smartwatch (Dutot et al., 2019). According to Talukder et al., (2019), WFD is useful for the user to monitor their daily physical activities, achieve health goal, and reduce health-related threat. Since the WFD provided the applications and functions to assist their user during their physical activity, this study suggest that when a person believes that using WFD can effectively enhance their physical activity performance, they will be more willing to accept such devices. Hence, developed the hypothesis of below:

H1a: Perceived usefulness has a positive impact on intention to use of WFD among male.

H1b: Perceived usefulness has a positive impact on intention to use of WFD among female.

PERCEIVED EASE OF USE

Perceived ease of use is defined as the degree which a person believes that using WFD to manage his or her fitness activity is effortless (Kim & Chiu, 2019). The impact of perceived ease of use had been found significantly influencing several wearable devices in the previous studies including healthcare wearable devices (Asadi et al., 2019; Chau et al., 2019; Lee & Lee, 2020; Zhang et al., 2017) and smartwatch (Dutot et al., 2019), as well as WFD (Beh et al., 2019; Kim & Chiu, 2019; Owen et al., 2019; Talukder et al., 2019). However, the impact of perceived ease of use are not found significantly influencing the intention to use of wearable self-tracking devices (Pfeiffer et al., 2016). The result of this might due to the survey group of them can yet evaluate the importance of ease of use of the devices due to the novelty of the technology (Pfeiffer et al., 2016). However, since WFD had been introduced several years ago, most of the people are already know the how to operate WFD. Hence, there shall be no similar issue in WFD. Also, since WFD involved several complicated operation, for example activating the activity applications and reading the quantified data. This study suggest that when a person believes that managing his or her physical activities with WFD is effortless, they will be more willing to use WFD. Hence, suggest the hypothesis of below.

Malaysia cannot be consider as a new technology nowadays, **Table 1: Measurement Items**

H2a: Perceived Ease of Use has a positive impact on intention to use of WFD among male.

H2b: Perceived Ease of Use has a positive impact on intention to use of WFD among female.

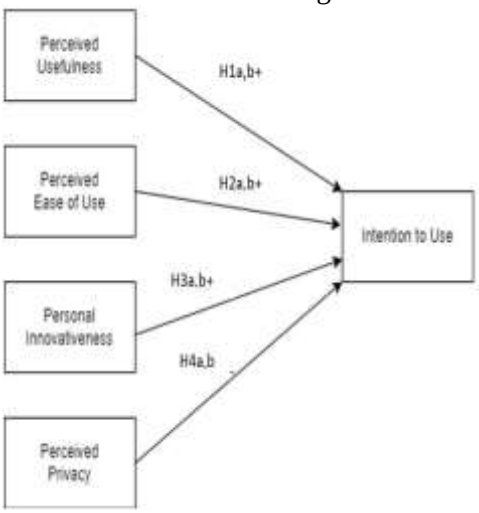

Figure 3: Conceptual Framework

PERSONAL INNOVATIVENESS

Personal innovativeness is defined as the degree of a person's willingness to try out any new technology. The previous study regarding the acceptance of WFD shown that the positive and negative perception toward technology can actually influence their intention to use of WFD (Kim & Chiu, 2019). On the other hand, Talukder et al., (2019) also found that personal innovativeness is an important determinants on the behavioural intention to use WFD. In a study of acceptance of wearable self-tracking devices had found that personal innovativeness of a potential user is a crucial determinants for them when the product is relatively new to them (Pfeiffer et al., 2016). Although WFD in

the development of WFD is still situated at the growth stage of the product's life cycle (Reyes-Mercadohors, 2018). Therefore, this study suggest that when the degree of a

person's willingness to try any new technology is higher, they will be more willing to use WFD. Hence, developed the hypothesis of below

H3a: Personal Innovativeness has a positive influence on intention to use of WFD among male.

H3b: Personal Innovativeness has positive influence on intention to use of WFD among female.

PERCEIVED PRIVACY

Perceived Privacy is defined as the degree of the confident of a person toward the personal data collected by WFD is safely handled and stored (Spagnolli et al., 2014). According to the previous study, wearable devices collect a vast amount of personal data from the user, the unprecedented volumes of personal data collected by the devices could potentially harmed the users due to privacy breaches such as discriminatory profiling, manipulative marketing and data breaches (Cilliers, 2020). According to Owen et al., (2019), perceived privacy and security is the most significant factors that impacted the behavioural intention to use WFD, which suggest that people are concerned on privacy and security risk of WFD while making their decision to use them to monitor their fitness activity. According to Pfeiffer et al., (2016), due to wearable devices involved a vast amount of data collection and analysis, the pre-adoption behaviour of wearable devices was significantly influenced by the degree of trust toward how WFD provider handle their personal

Constructs	Measurement Items
PU1	Using fitness wearable device is useful for doing exercises (Kim & Chiu, 2019).
PU2	Using fitness wearable device enhances my effectiveness in doing exercises (Kim & Chiu, 2019).
PU3	Using fitness wearable device can help me develop exercise habit (Kim & Chiu, 2019).
PU4	Using fitness wearable device can help me maintain a healthy life (Kim & Chiu, 2019).
PEoU1	Fitness wearable devices are easy to use (Kim & Chiu, 2019).
PEoU2	Learning to use fitness wearable devices is easy (Kim & Chiu, 2019).
PEoU3	Interaction with fitness wearable devices is clear and understandable (Kim & Chiu, 2019).
PI1	I like to try out new things and products (Kim & Chiu, 2019).
PI2	I stay up to date on newest technology development in my areas of interest (Kim & Chiu, 2019).
PI3	Overall, when a new technology launches, I am among the first to purchase it among my circle of friends (Kim & Chiu, 2019).
PP1	I am worried that fitness wearable device collects too much personal health information about me (Escobar-Rodríguez & Carvajal-Trujillo, 2014).
PP2	I am worried that supplier of fitness wearable device might share my personal information with other business entity (Escobar-Rodríguez & Carvajal-Trujillo, 2014).
PP3	When I use fitness wearable device, I am worried that hackers can access my personal information (Escobar-Rodríguez & Carvajal-Trujillo, 2014).
PP4	In general, I am worried about my privacy while using fitness wearable device (Escobar-Rodríguez & Carvajal-Trujillo, 2014).
IU1	I am interested to try fitness wearable device.

data. As the previous studies shown that the privacy issue is among the most important factors that is influencing the acceptance of wearable devices, this study suggest that when a person is being less confident on the how the WFD handled and stored their personal data, they will be less intended to use WFD to monitor their physical activity. Hence developed the hypothesis of below:

H4a: Perceived Privacy has negative impact on intention to use WFD among male.

H4b: Perceived Privacy has negative impact on intention to use WFD among female.

IU2	I plan to purchase a fitness wearable device in the future.
IU3	I will use fitness wearable device frequently in the future.
IU4	I would like to recommend fitness wearable devices to others.

PARTICIPANTS AND DATA COLLECTION PROCEDURE

Before the data collection process had begun, this study had conducted a pilot test with 40 participants to ensure the reliability and the validity of the measurement items. After the pilot test had confirmed that all measurement items are free from reliability and validity issue. This study referred Kreycie & Morgan table to find out the minimum sample size that is required for this study at 95% confidence interval and 5% margin of error, which the minimum sample size was targeted at 384 (Krejcie & Morgan, 1970). A convenient sampling method was utilised and recruited 391 participants from all around Malaysia by distributing the survey with the use of social media.

MEASUREMENT ITEMS DEVELOPMENT

In order to test the hypotheses, a quantitative survey was developed to collect the useful data for this study. The measurement items of the quantitative survey was adapted from the previous studies, for instant perceived ease of use, perceived usefulness and personal innovativeness was adapted from the study of Kim & Chiu, (2019); and perceived privacy was adapted from Escobar-Rodríguez & Carvajal-Trujillo, (2014). All measurement items of the questionnaire will be measured with five point Likert-scale where (1) is strongly disagree and (5) is strongly agree.

DATA ANALYSIS

After the data collection, Partial Least SquaredStructural Equation Modelling (PLS-SEM) was conducted with the use of SmartPLS 3.0. According to the guideline of Hair et al., (2017), there are two steps of data analysis procedure with PLS-SEM. Firstly, this study will be undergoing the measurement items assessment using the PLS-SEM algorithm, including internal consistency reliability, convergent validity and discriminant validity. Then, the bootstrapping technique with PLS-SEM algorithm will be applied to examine the R-squared for the explanation of endogenous latent variables and the significance and relevance of path coefficient

DESCRIPTIVE ANALYSIS

Table 2: Demographic Profile

Measurement	Items	Frequency (n)	Percentage (%)
Gender	Male	198	50.64
	Female	193	49.36
	Total	**391**	**100**
Age	Below 20	52	13.30
	20-29	228	58.31
	30-39	58	14.83
	40-49	36	9.21
	Above 50	17	4.35
	Total	**391**	**100**
Education Level	High School	84	21.48
	Diploma	92	23.53
	Undergraduate	197	50.38
	Master	16	4.09
	Professional Qualification	2	0.51
	Total	**391**	**100**
WFD Ownership	User	195	49.87
	None User	196	50.13
	Total	**391**	**100**

Table 2 represent the demographic profile of the participants. Overall, there are total 391 responses were collected to conduct this study. The final data shown that there are 50.64% of the participants are male and 49.36% of the participants are female. Besides that, more than half of the participants are aged 20-29 year old which consist of 58.31% of the total responses, and coming with 30-39 year old, below 20 year old, 40-49 year old and above 50 year old which consist of 14.83%, 13.30%, 9.21% and 4.35% respectively. In term of education level, 50.38% of the participants are at undergraduate level, whereas there are 23.53% of the participants are at Diploma level, 21.48% at High School level, 4.09% at Master Degree Level, and 0.51% are having Professional Qualification. Lastly, 49.87% of the participants owned an WFD where 50.13% are not.

MEASUREMENT ITEMS ANALYSIS

Table 3: Factor Loading, AVE, Cronbach Alpha and Composite Reliability

Construct	Items	Factor Loading	AVE	Cronbach Alpha	Composite Reliability
Perceived Ease of Use	PEoU1	0.9004	0.8002	0.8751	0.9231
	PEoU2	0.8997			
	PEoU3	0.8833			
Perceived Usefulness	PU1	0.8715	0.7730	0.9021	0.9316
	PU2	0.8954			
	PU3	0.8650			
	PU4	0.8846			
Personal Innovativeness	PI1	0.8762	0.6763	0.7614	0.8619
	PI2	0.8405			
	PI3	0.7448			
Perceived Privacy	PP1	0.9162	0.8567	0.9445	0.9589
	PP2	0.9245			
	PP3	0.9338			
	PP4	0.9276			
Intention to Use	IU1	0.8861	0.7820	0.9070	0.9348
	IU2	0.8651			
	IU3	0.9089			
	IU4	0.8765			

In order to assess the measurement model of this study, this study examined the factor loading and average variance extracted (AVE) for convergent validity; Cronbach Alpha and composite reliability for internal consistency reliability; and Fornell-Larcker Criterion and HTMT value for discriminant validity. These assessment was conducted according to the guideline of Hair et al., (2017). As reported in Table 3, every factor loading was higher than the minimum requirement of 0.70, and AVE was greater than 0.50, indicating that there are no convergent validity issue in the measurement model. Furthermore, all constructs are having a Cronbach Alpha and Composite Reliability that is greater than 0.70, indicating that all constructs had passed the internal consistency reliability test **.**

Table 4: Fornell-Larcker Criterion

	IU	PEoU	PI	PP	PU
IU	0.8843				
PEoU	0.7292	0.8945			
PI	0.6784	0.6932	0.8224		
PP	-0.1973	-0.1271	-0.0353	0.9256	
PU	0.7686	0.7296	0.6907	-0.1270	0.8792

In term of discriminants validity, this study assessed both Fornell-Larcker Criterion and HTMT to ensure the measurement model have no discriminant validity issue in a conservative setting. Showing in Table 4, the squared root of AVE of each construct were greater than the cross-loading with other construct,

indicating that every constructs have no discriminant validity issue under the Fornell-Larcker criterion assessment. Moreover, HTMT as a more comprehensive discriminant validity test, every HTMT value in Table 5 was lower than 0.85 (Henseler et al., 2015), indicating that all constructs' measurement model have no discriminant validity issue under the HTMT discriminant validity assessment.

Table 5 Heterotriat-Monotrait Ratio (HTMT)

	IU	PEoU	PI	PP	PU
IU					
PEoU	0.8163				
PI	0.8047	0.8275			
PP	0.2117	0.1380	0.0665		
PU	0.8477	0.8208	0.7096	0.1356	

STRUCTURAL EQUATION ANALYSIS

Table 6: Result of PLS-SEM

	Path Coefficient (Male)	Path Coefficient (Female)	P-Value (Male)	P-Value (Female)	Hypothesis
PU → IU	0.5560*	0.3754*	0.0000	0.0000	H1a: Supported H1b: Supported
PEoU → IU	0.1927*	0.2133*	0.0096	0.0130	H2a: Supported H2b: Supported
PI → IU	0.1707*	0.3326*	0.0160	0.0000	H3a: Supported H3b: Supported
PP → IU	-0.0888*	-0.1074*	0.0050	0.0052	H4a: Supported H4b: Supported

Note: Significance level are denoted by * (0.05)

Before assessing the structural equation model, this study assessed the potential collinearity issue of the research model by looking at the variance inflation factor (VIF) values. The result showed that all VIF values were ranging from 1.0265 to 2.7522, which is being much more lower than the value of 10 (Gefen et al., 2011), indicated that the research model have no collinearity issue. After ensuring that there are no collinearity issue among the factors, the responses were separated according to their gender and bootstrapping technique was performed to assess the structural equation model with 5000 iterations on each gender separately. The result in Table 7 shown that every path coefficient are having a p-value that is lower than 0.05, indicated that all the proposed hypotheses were supported. This findings confirmed that perceived usefulness, perceived ease of use, personal innovativeness and perceived privacy were the key determinants of intention to use of WFD of both male and female in Malaysia. The R-squared value of 0.7442 for male population and 0.6664 for female population had met the minimum requirement of 0.20 according to the guideline of Hair et al., (2017).

DISCUSSION

The R-squared value of 0.7442 and 0.6664 in the result of male and female had achieved the minimum requirement of 0.20 of the guideline of Hair indicated that the research model of this study was accounted significant variance on intention to use of WFD in Malaysia for both gender (Hair et al., 2017). This suggest that the research model provides an effective means in predicting the intention to use of WFD in Malaysia for both male and female. For either genders, the result of perceived usefulness and perceived ease of use are consistent with the result of previous study on acceptance of WFD in other country and other wearable devices (Beh et al., 2019; Dhiman et al., 2019; Kim & Chiu, 2019; Pfeiffer et al., 2016; Talukder et al., 2019); personal innovativeness is aligned with the study of Talukder et al., (2019) and Pfeiffer et al., (2016); and perceived privacy is aligned with the study of Owen et al., (2019). The result of this study had confirmed the direct impact of perceived usefulness, perceived ease of use, personal innovativeness and perceived privacy on intention to use of WFD in the context of Malaysia of both genders.

As the result shown, male ranked perceived usefulness as the most

impactful factors and followed by perceived ease of use, personal innovativeness and perceived privacy, while female ranked perceived usefulness and personal innovativeness as almost the equal and most impactful factors and coming with perceived ease of use and perceived privacy. The differences of the ranking might suggest that the WFD provider and marketer might need to have different product design and marketing strategy to promote WFD to different gender.

In managerial aspect, the result of this study suggest male consumers gave the most concern on the usability and features of WFD in compare with other components as their acceptance of WFD is dominated by perceived usefulness. In contrast, female consumers not only give their most concern on the usability and features of WFD, but also whether the technological innovation of the devices met their personal innovativeness as the acceptance of female consumers are mainly and almost equally driven by both perceived usefulness and personal innovativeness. Hence, we conclude that the WFD provider shall design their devices differently when they are targeting different gender. For example, if the WFD provider is targeting the male consumers, they shall make sure that their devices had included all the fitness features and metrics that is useful for male users to best attract them. While to attract female consumers, the WFD provider not only need to make sure that their devices is useful, but also the design of the devices shall be innovative to attract the high personal innovativeness female consumers. After fulfilled the most important component of each gender, the WFD provider shall ensure that the devices is user friendly, innovative and free from privacy issue as the complementary components to increase the usage intention of male consumers, while just user friendly and free from privacy issue for female consumers.

In marketing aspect, marketer shall make sure that the consumers from both gender groups understand the usage of the devices since perceived usefulness is the most important determinants that affect the intention to use of WFD to both gender. In order to achieve this, the marketer could organize various campaign or using advertisement to share the features and usability of the devices to the potential consumers. Particularly to female, since their acceptance of WFD is highly influenced by their personal innovativeness, marketer shall approach shall focus on identifying the high personal innovativeness female consumers to best promote their product. Meanwhile, although the personal innovativeness of male consumers is significantly influencing the intention to use of WFD, the impact of it is not as strong as it to female, this might suggest that the personal innovativeness of male is being higher than female and see WFD as a less innovative device. Hence, this study suggest that the marketer could mention the technological innovation of the devices while promoting it to male consumers to increase the desire of them instead of identifying the innovative individual. The impact of perceived ease of use toward the intention to use of WFD is very similar to both genders, hence, this study suggest that the marketer could demo or teach the consumers on how to use the devices. When the consumers feel the devices is easy to use, they will be more willing to use it. Lastly, the marketers shall answer the privacy doubt of the consumers as when the consumers from both genders are being unconfident

on the privacy security of the devices, they will be less likely to adopt it.

CONCLUSION

In conclusion, driving by the increase of physical activity awareness among the public and government of Malaysia. Malaysia had provided a very good market opportunity for the WFD provider to expand their businesses. However, in order for the WFD provider to compete with other competitor in the market, it is important for them to understand the factors influencing the intention to use of WFD in Malaysia and also understanding the differences between each market segment such as male and female. This study had approached to explore the factors influencing the intention to use of WFD among male and female and found that male and female have same factors that drive their intention to use of WFD. However, they are weighed each factors differently when deciding whether to use or not to use WFD to monitor their fitness activity. Nevertheless, the intention to use of WFD of both male and female are influenced by perceived usefulness, perceived ease of use, personal innovativeness and perceived privacy.

LIMITATION AND FUTURE WORK

Although this study had found several meaningful findings, this study is not free from limitation. Firstly, due to the complex challenges in the evaluation of a research model, it is hard to involved every potential factors in to the research model (Beh et al., 2019). Since this study only focused on the cognitive and personal factors, this study suggest the future study shall explore the impact of other potential factors from different category such as social factors and cultural factors on intention to use of WFD in Malaysia. Secondly, the result of this study was generated particularly with the population from Malaysia. Therefore, the result might not be applicable in other country. Hence, it is advisable that the future researcher could conduct such study in other country. Lastly, this study only explored the factors influencing intention to use of WFD among male and female, this study suggest that the future researcher shall explore the similar topic with different market segment in Malaysia.

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