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Digital Addiction among Young Adolescent: Mitigating the Impact of Media Technological Adversity

Muhammad Ashraf Fauzi¹, Noor Suhani Sulaiman², Nur Muneerah Kasim³, Siti Aminah Harun⁴

¹Faculty of Industrial Management, University Malaysia Pahang, 26300, Gambang, Kuantan, Pahang, Malaysia.

²Faculty of Information and Interactive Technology, Widad University College, 25200, Kuantan, Pahang, Malaysia.

^{3,4}Faculty of Education and Social Sciences, Widad University College, 25200 Kuantan, Pahang, Malaysia.

ashrafauzi@ump.edu.my

Abstract. Addiction toward social media has become a new norm, especially among young adolescent. Social media users in Malaysia accounted to nearly 20 million, more than half of the population. Some individual having more than one account in different social media platform. With the increasing prevalent of social media addiction among young adolescent, this study ought to identify what are the critical factors that can influence one addiction toward social media. Based on the technology acceptance model (TAM) and flow-happiness theory, this study would like to unfold this issue and connect the possible factors that play critical role in user's social media addiction based on its detrimental impact. Using partial least square structural equation modelling (PLS-SEM), this study applies the quantitative study by testing the antecedents of social media addition. 217 respondents who are mainly university students responded to the survey. It was found that the most critical factor is perceived ease of use on perceived usefulness and subsequently attitude. The second most critical path is user's enjoyment toward satisfaction. Surprisingly, perceived usefulness towards habit and attitude toward social media addiction itself was not significant. This study would help practitioners to implement mitigating strategy to reduce social media addiction young adolescent, especially those who studying in school and higher education institution.

Keyword: Social media addiction, technology acceptance model, flow theory

1. Introduction

Excessive smartphone and device usage has led people to be dependence on social networking sites or social media in their daily life (Yu et al ⁴⁵; Fauzi ¹⁴). Through social media, human can be connected and communication via virtual platform. Most of virtual platform serve as social media tools that can overcome the space and time boundaries (Kizgin et al 2018). The uses of social media provide enjoyment and convenicen to users that can be access freely. Despite the dependence on social media, researchers and scholars alike has link several detrimental impact of social media to users (Zheng & Lee, 2016).

Social media has been associated with various negative effect. Prolonged use and excessive



dependence on social media has been linked with withdrawal symptoms, low self-control and preoccupation (Wilcox & Stephen, 2013). Young adolescent is a group that is most vulnerable compared to other group because they have lower self-control (Fauzi et al 2018a; Fauzi et al., 2019a). Social media application and platform that is provided has interfered with daily responsibilities and duties such as responsibilities towards academia and students (Barnes et al., 2019). Individual who are refrained from using social media might feel agitated if social media are being taken away. Young adolescent is prone to develop fear of missing out from attending up to date news and information from friend and peers.

This study is motivated by the urge to understand social media addiction by the integration of two main theories in evaluating one social media addiction. The role of technology acceptance model (TAM) and flow theory. TAM is a prominent theory in understanding user's adoption of technology with role of perceived usefulness (PU) and perceived ease of use (PEOU). While flow theory is a theory to understand one flow in relation to compulsive use leading to social media addiction.

Secondly, motivation for this study is the focus on social media addiction in general rather than solely on Facebook addiction. The need to understand social media addiction in general is because there are multiple social media platform that is now more popular than Facebook such as Instagram and Weibo within China context (Han et al 2018). Understanding the general scope of social media addiction would entitle researchers to understand critical factors that contribute to social media addiction compared to previous studies (Leong et al 2019). Due to excessive studies on Facebook as the main social media addiction, there has been many Facebook addiction scale such as Facebook Intrusion Questionnaire, Facebook addiction scale, Facebook Addiction Symptoms scale and Bergen Facebook Addiction scale (Banyai et al 2017). In general, these scale are accurate in measuring one addiction to Facebook because Facebook has distinct and unique characteristics compared to other social media. Elucidating from this understanding, the need to assess other factors within other social media platform is needed as other features and attributes of social media are different than Facebook.

2. Technology acceptance model

An extension from theory of reasoned action (TRA) and theory of planned behaviour (TPB), technology acceptance model (TAM) was introduced to understand user's adoption of technology (Venkatesh & David, 2000). PU and PEOU was introduced in TAM to explain human technology related variable in making decision to technological and information system in organization. These two variables had been extensively used to study user's intention as well as related behaviour in adopting new technologies. Various behaviour was tested using TAM which include e-learning, e-library, e-commerce, smartcard, e-banking and e-tax filing (Elkaseh et al 2016). As social media use is part and parcel of one daily activities, the need to study this within the scope of addiction among young adolescent is crucial. The perceived ease of using such social media platform as well as its usefulness provide the understanding of how users adopt social media alongside virtual communities' platform that serve as contributing factor (Fauzi et al 2018b).

2.1. Flow theory

Flow theory was introduced by Csikszentmihalyi (1975) and defined as "the holistic experience that people feel when they act with total involvement". Flow is a psychological phase where one experiences intrinsic enjoyment (Pelet et al 2017). Flow theory has been studied within virtual communities (Hoffman & Novak, 2009), online gaming (Chang, 2013), and online shopping (Huang, 2016). The flow state is regarded as a decisive factor in explaining user behavior via social media (Chang & Zhu, 2012). When fully absorbed in such activity, one will lose their self-consciousness by full concentration (Molinillo et al 2018). Online flow can be created and experienced by an individual immersed in online activity (Hoffman & Novak, 2009). In this state, one affective response to technology adoption is characterized by the interaction bonded by human-computer activity. At this juncture, the involvement in such activity is deepened without having to do much effort. Supplemented with enjoyable experience allows an individual to exercise a sense of control upon their

activity and action.

In social media context, flow state can be a satisfaction and desirable moment for users, which should result in positivity for user experience. This study is designed to evaluate flow theory within the scope of social media. Previous studies have applied flow theory in social media usage and/or addiction (Pelet et al., 2017; Chang & Zhu; 2012; Molinillo et al 2018). One of the features in social media is that users can provide personal information and pictures within their personal profiles which are publicly available for the public to see. The positive feedback given by friends and strangers pose as a two-way communication which serves as motivation and lead to satisfying experience for users. This interaction would provide a flow experience which can lead to addiction.

2.2. Hypothesis development

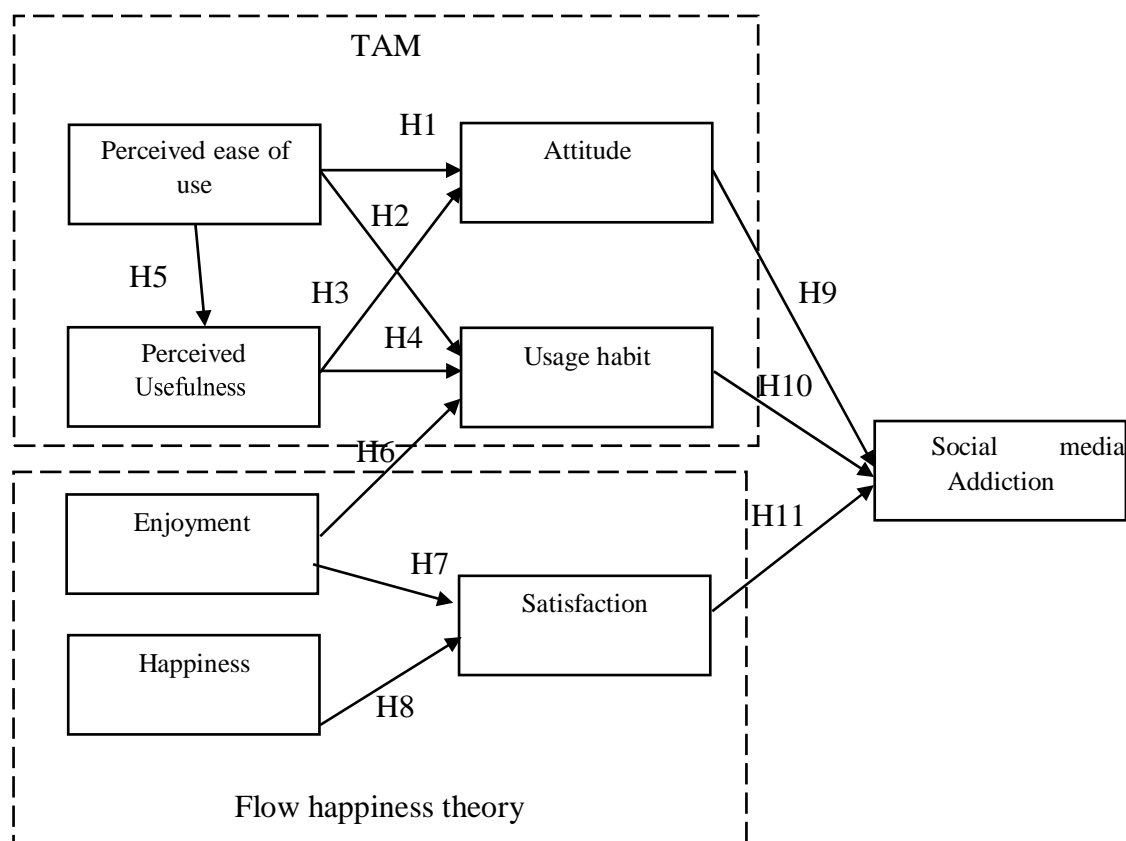


Figure 1: Research model

2.2.1. *Perceived ease of use.* Users are inclined to use a technology if it is free from effort which is delineated by perceived ease of use (Park et al 2014). With the facilitation from gadgets and devices, using social media would have no problem for young adolescents. Recent research has shown that PEOU having a positive influence on attitude towards social media (Al-Rahimi et al 2018). Apart from attitude, PEOU has a strong influence on habit which forms one subconscious dependent on social media which turns into addiction. The experience of using technology that requires little or no effort can create enjoyment. It was proven that PEOU has a significant impact on perceived enjoyment more than PU (Wirts & Gottel, 2016).

- **Hypothesis 1:** Perceived ease of use has a positive influence on the user's attitude towards social media usage

- **Hypothesis 2:** Perceived ease of use has a positive influence on user's habit towards social media usage

2.2.2. *Perceived usefulness.* Another important variable in TAM is perceived usefulness (Davis et al 1989). It is defined as the magnitude of one's perception in believing that by adopting a technology would increase their performance in work and task. The technology would provide facilitation in their effort to use in order to complete task in hand (Hajli, 2014). As user's tend to use internet in most of their daily life, socialmedia would help in connecting to other people through virtual and digital platform available. Users can communicate by sharing opinions, conversation by live video and chats that enhance their relationship between friends and family in virtual social media platform. Therefore, as the perception that social media would facilitate one social life, perceived usefulness on certain technology would develop a positive attitude towards the adoption of social media.

Between adolescent who are socially and non-socially anxious, PU has shown to be a strong factor for social media use and social competence (Yang and Brown, 2015). Adolescent who are constantly and within the vulnerability of being anxious would develop greater addiction of social media use. Similarly, introvert individual may use social media more than extroverted. This is because social media is platform where individual can free express themselves and non-judgemental on their activities. Weighing the positive impact of PU, this study propose that PU would have a positive impact on one attitude in adopting social media, supported by aforementioned studies. Therefore, the next two hypotheses are presented as:

- **Hypothesis 3:** Perceived usefulness has a positive influence on the user's attitude towards social media
- **Hypothesis 4:** Perceived usefulness has a positive influence on user's habit towards social media

Considering the fact that within TAM, most of the previous studies test PEOU having positive influence on PU in social media studies (Siamagka et al 2015), cloud computing (Gangwar et al 2015) and e-portfolios (Abdullah et al 2016). This is explained in the reality that as a technology is easy to use, one would find it usefull to be adopted. As both factors are crucial in understanding user's technology adoption (Chen et al 2013), user's acceptance or rejection relies deeply within the correlation of these two variables (Abdullah et al 2016). These are even considered to be more impactful than the positive attitude as a whole (Bhatiasevi, 2011; Chen et al 2013; Giovanis et al 2013). Despite this claim, attitude is considered relevant with this study as to see whteher the inclination of attitude would impact user's habit in relation to compulsive behaviour of social media addiction.

- **Hypothesis 5:** Perceived ease of use has a positive influence on the user's perceived usefulness

2.2.3. *Enjoyment*

According to Sullivan and Koh (2019), enjoyment is an individual perception whether an entertainment would provide hedonic motivation for their pleasure. In the adoption of social media, enjoyment is termed as one meaning development as a social interaction in facilitating the user's communication quality. Being in the state correlate highly with one intrinsic and extrinsic motivation from perceived usefulness and perceived enjoyment. Human adoption of information and communication technologies is highly dependent on various factors of extrinsic and intrinsic motivations (Kang & Schuett, 2013).

- **Hypothesis 6:** User's enjoyment will have a positive influence on social media habit
- **Hypothesis 7:** User's enjoyment will have a positive influence on social media satisfaction

2.2.4. Happiness

Depression is associated with social withdrawal from social networks such as low friendship quality and low social support (Worsley et al., 2018). Individual possessing depressive symptoms require more human contact rather than virtual interaction. Despite that adolescents who are undergoing depressive episodes opted online interaction rather than face-to-face meetings (Worsley et al., 2018). With this, individuals found social media as the best option to mitigate their anxiety of face-to-face interaction and as a viable method for one to overcome their life problem towards technology-based communication. Experience through products such as electronic devices, video games, and traveling creates better happiness compared to material such as apparel and clothing (Berezan et al 2018). Going through an experience offers greater self-definition and thus leads to greater happiness compared to material goods. Similarly, social media are products of experiential. It can shape one reinforce life experience, in a positive way as well as negative (Scheinbaum, 2017). Hence the next hypothesis is presented as:

- **Hypothesis 8:** User's happiness has a positive influence on satisfaction

2.2.5. Attitude

The technology acceptance model proposed that individual attitude is a formation from their perceived ease of use and perceived usefulness of applying the technology (Bailey et al 2018). Studies have shown that attitude as a strong predictor of user's adoption of social media, with PEOU and PU as the preceding indicators (Natarajan et al 2017). Individual having positive attitude towards the use of social media would make some effort to develop using it. In practical, with the use of gadgets and other devices, using social media had become more effortless for communicating, interacting and having fun with peers and friends. The TAM has shown to explain user's adoption of other technologies such as e-tax filing, e-commerce, e-banking and e-learning (Elkaseh et al 2016).

- **Hypothesis 9:** Attitude have positive influence on user's social media addiction

2.2.6. Habit

Specific use of technology-based platform provides a pleasant experience, users tend to have a stronger habit to repeat such behavior (Yang et al., 2016). As one uses social media in repetition, a cognitive system is formed in one's brain that triggers action surrounding response towards such behavior (Osatuyi and Turel, 2018). For instance, the notification via Facebook apps as one receives it and perceived it as enjoyable which over time develops the habit of checking every time a notification is received. This action is repeated without one having to pay any cautious on the action appropriateness.

- **Hypothesis 10:** User's habit has a positive influence on social media addiction

2.2.7. Satisfaction

Satisfaction would lead to one adoption of social media due to its everlasting engagement and thus ultimately addiction. According to Zhu and Chen (2015), from the motivation theorist, social media act as unobserved need that motivate one behaviour. Moreover, it was posited that satisfaction is an indicator of quality of life that measure one life general evaluation, be it positive or negative (Longstreet & Brooks, 2017). User's emotional needs are fulfilled when they are satisfied in doing something. The satisfaction act as reinforcement that will further engaged user toward the need of social media (Chen, 2019). With the vast past work (Hsiao et al 2016; Zhu & Chen, 2015) showing user's satisfaction as strong predictor of continuance adoption of social media, this study proposed that:

- **Hypothesis 11:** User's satisfaction has positive influence on social media addiction

3. Methodology

3.1. Sample

Data was collected from students studying in a pre-university course from various states in Malaysia. Students were recruited and were asked to answer the survey via a lecturer mediated facilitation through each question in class. Students in a pre-university were deemed as the best group of sample for young adolescent respondents. They are a group having just left school and in the intermediary phase before going to university. Online surveys using Google form documents were sent to students and were asked to answer carefully from one question to another.

3.2. Tool

This study applies partial least square structural equation modeling (PLS-SEM). As opposed to the Covariance based SEM, PLS-SEM has several characteristics that make it more preferable in this study. Fundamentally, PLS-SEM main difference to CB-SEM is on its prediction and exploration basis (Richter et al., 2016). It can simulate a complex model and having the ability to specify the relationships among variables. PLS-SEM comprise of two-stage analysis, measurement and structural model (Hair et al., 2014; Ali et al., 2018).

4. Result and analysis

4.1. Demographic information

Based on the demographic background in table 1, it can be posited that the respondents come from various backgrounds in Malaysia. Respondents' age is from 17-19 years old. 18 years old accounted for 80.6% (175) of the sample. The majority of the respondents are female students with 64.1%. Student's backgrounds came from various majors including architecture (9.7%), medicine (6.5%) and engineering (4.6%). The family income shows that the majority come from high-income groups of having more than RM9001 with 35.5% while those from range RM1000 to RM3000 accounted second with 20.7%. Most of the respondents admit to spending more than 3 hours on social media with 52.5%.

Table 1. Demographic information

Measure	Items	Frequency	Percentage
Gender	Male	78	35.9
	Female	139	64.1
Age	17	8	3.7
	18	175	80.6
	19	34	15.7
Course	Allied Health Science	9	4.1
	AED	21	9.7
	Biological Science	5	2.3
	Dentistry	4	1.8
	Engineering	10	4.6
	Medicine	14	6.5
	Pharmacy	9	4.1
	Nursing	3	1.4
Family income	Physical Science	2	0.9
	Below RM1000	13	6.0
	RM1000 to RM3000	45	20.7
	RM3001 to RM5000	26	12.0

	RM5001 to RM6000	18	8.3
	RM6001 to RM7000	12	5.5
	RM7001 to RM9000	26	12.0
	More than RM9001	77	35.5
Time spent on social media (hours)	Less than 1 hour	11	5.1
	2-3 hours	92	42.4
	More than 3 hours	114	52.5
Number of smartphone own	One	185	85.3
	Two	31	14.3
	Three	1	0.5
State	Johor	21	9.7
	Kedah	12	5.5
	Kelantan	14	6.5
	Melaka	4	1.8
	Negeri Sembilan	5	2.3
	Pahang	24	11.1
	Penang	10	4.6
	Perak	16	7.4
	Perlis	3	1.4
	Sabah	4	1.8
	Sarawak	6	2.8
	Selangor	58	26.7
	Terengganu	24	11.1
	Wilayah Persekutuan Kuala Lumpur	13	6.0
Wilayah Persekutuan Putrajaya	3	1.4	

4.2. Measurement model

The measurement model is assessing in term of its indicator loadings, composite reliability, and average variance extracted (AVE). All items loading should not exceed 0.6 (Chin 2010) while the composite reliability should not exceed 0.7 (Hair et al 2014). AVE that reflect the overall value of the variance in the indicators to its related construct should be more than 0.5 (Hair et al 2014). Item loading

Item loading of the construct should be more than 0.7 for confirmatory study and 0.6 for exploratory study (Hair et al 2014; Chin, 2010). Based on table 2, the indicator loading all reached a minimum value of 0.6, with the exception of PU4, SAT1 that were found to be below than 0.60 which subsequently had been deleted.

On the internal consistency of the construct, measured by both Cronbach alpha and composite reliability, all the construct was found to be having a reliable value of having more than 0.7 (Sarstedt et al., 2014). From table 2, the value Cronbach alpha ranging from 0.712 to 0.936, while composite reliability ranging from 0.82 to 0.95, indicating a high reliability measuring by the construct internal consistency reliability. As for the AVE, all the construct values achieved the threshold value of more than 0.5, indicating that all the items convergent to its desired construct.

Table 2: Indicator loading, internal consistency and convergent validity

Construct	Item	Loading	Cronbach	Composite reliability	AVE
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Attitude	ATT1	0.847	0.721	0.839	0.637
	ATT2	0.684			
	ATT3	0.852			
Depression-Happiness	DEH1	0.822	0.936	0.95	0.759
	DEH2	0.914			
	DEH3	0.922			
	DEH4	0.866			
	DEH5	0.869			
	DEH6	0.828			
Enjoyment	ENJ1	0.8	0.801	0.883	0.716
	ENJ2	0.899			
	ENJ3	0.837			
Habit	HAB1	0.887	0.816	0.891	0.733
	HAB2	0.913			
	HAB3	0.76			
Perceived ease of use	PEOU1	0.793	0.898	0.93	0.768
	PEOU2	0.931			
	PEOU3	0.889			
	PEOU4	0.887			
Perceived usefulness	PU1	0.858	0.835	0.884	0.605
	PU2	0.687			
	PU3	0.854			
	PU5	0.717			
	PU6	0.757			
Satisfaction	SAT2	0.83	0.798	0.882	0.713
	SAT3	0.879			
	SAT4	0.823			
Social media addiction	SMA1	0.665	0.712	0.82	0.536
	SMA2	0.773			
	SMA3	0.643			
	SMA4	0.83			

4.3. Discriminant validity

In determining whether the items are loaded to its intended construct, discriminant validity test using Fornell & Larcker criterion and Heterotrait-Monotrait ratio of correlation (HTMT) will be assessed. As Fornell Larcker as is not compulsory as to HTMT in analysing discriminant validity, this study ought to test both criteria in having wider analysis on the construct's item.

In Fornell & Larcker criterion, the square root of AVE (bolded in diagonal) should be higher than its inter related construct (Hair et al 2014). Table 3 shows that the square root of AVE is higher than its inter related construct, which indicate that the Fornell Larcker analysis is substantial. While for HTMT analysis (table 4), no HTMT values exceed the minimum value of 0.85 in measuring the geometric mean of the average correlation of the indicators in measuring the corresponding construct (Voorhees et al 2016).

Table 3. Fornell & Larcker criterion

	ATT	ENJ	HAB	HAP	PEOU	PU	SMA	SAT
ATT	0.798							
ENJ	0.416	0.846						
HAB	0.52	0.567	0.856					
HAP	0.302	0.07	0.003	0.871				
PEOU	0.564	0.477	0.514	0.232	0.876			
PU	0.499	0.514	0.383	0.23	0.65	0.778		
SMA	0.347	0.469	0.431	-0.075	0.348	0.26	0.732	
SAT	0.486	0.525	0.583	0.16	0.608	0.543	0.395	0.844

ATT=Attitude, ENJ=Enjoyment, HAB=Habit, HAP=Happiness, PEOU=Perceived ease of use, PU=Perceived usefulness, SMA=Social media addiction, SAT=Satisfaction

Table 4. Heterotrait-Monotrait ratio of correlation (HTMT)

	ATT	ENJ	HAB	HAP	PEOU	PU	SMA	SAT
ATT								
ENJ	0.519							
HAB	0.654	0.692						
HAP	0.397	0.084	0.051					
PEOU	0.681	0.554	0.588	0.255				
PU	0.625	0.613	0.445	0.261	0.742			
SMA	0.454	0.596	0.543	0.117	0.419	0.345		
SAT	0.617	0.65	0.718	0.185	0.719	0.653	0.506	

ATT=Attitude, ENJ=Enjoyment, HAB=Habit, HAP=Happiness, PEOU=Perceived ease of use, PU=Perceived usefulness, SMA=Social media addiction, SAT=Satisfaction

4.4. Structural model

The structural model is assessed by applying a bootstrapping technique with an iteration of 500 sample size in the SmartPLS software. The values concerning the relationship between the variables are the path coefficient (β -value), that assess the strength of an exogenous variable to an endogenous variable. The t-value, is an assessment of the significance level at the 0.05 (t-value 1.645), 0.01 (t-value 2.33) and 0.001 (t-value 3.091) (Fauzi et al 2019a). The R^2 is to evaluate an endogenous variable's explained variance. The result of the structural path is presented in figure 2 and a complete table 5 shows with the decision on the hypotheses.

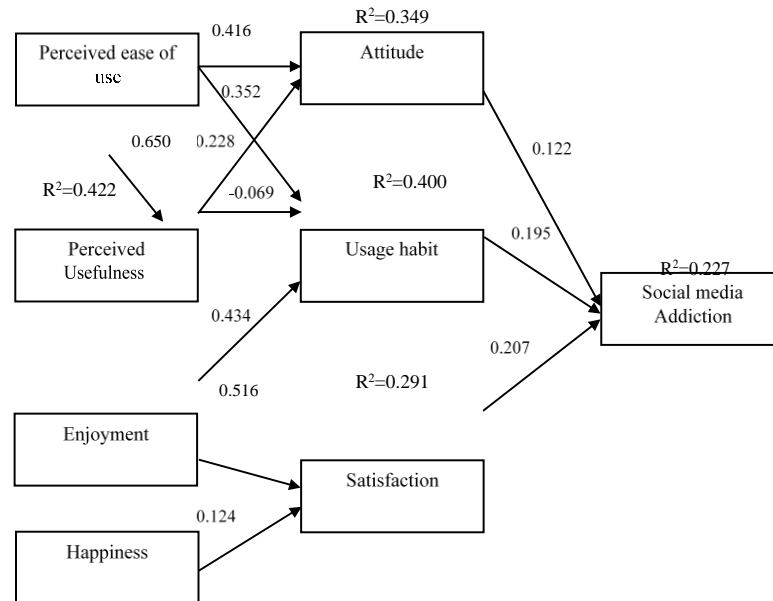


Figure 2. Result of structural model

From the eleven hypothesis presented, nine were found to be supported. The two unsupported hypothesis are H4 and H9. The strongest relationship is found from H5, PEOU on PU with 0.650 while H7, enjoyment on satisfaction is the second strongest relationship with 0.516. The explained variance of R² on the endogenous variable shows that all the exogenous variables has rather weak correlation. The lowest R² is social media addiction with 22.7% variance and the strongest is attitude with 34.9%.

Table 5. Result and decision on hypothesis

	β -value	f square	t-value	P-values	Decision
H1: PEOU → Attitude	0.416	0.154	5.089	0	Supported
H2: PEOU → Habit	0.352	0.133	4.275	0	Supported
H3: PU → Attitude	0.228	0.046	2.842	0.005	Supported
H4: PU → Habit	-0.069	0.004	0.901	0.368	Not Supported
H5: PEOU → PU	0.650	0.731	15.017	0	Supported
H6: Enjoyment → Habit	0.434	0.22	6.694	0	Supported
H7: Enjoyment → satisfaction	0.516	0.373	10.432	0	Supported
H8: Happiness → satisfaction	0.124	0.022	2.331	0.02	Supported
H9: Attitude → Social media addiction	0.122	0.013	1.631	0.104	Not Supported
H10: Habit → Social media addiction	0.261	0.052	3.518	0	Supported
H11: Satisfaction → Social media addiction	0.183	0.027	2.151	0.032	Supported

5. Discussion

Based on this study result, several key points can be considered within the scope of TAM and flow happiness theory.

5.1. Technology acceptance model

PEOU was found to have a significant influence on attitude, habit, and PU. It is safe to conclude that users take the ease of using social media heavily into their consideration to adopt and use. This has been proven in previous studies (Tsai et al 2017; Lin & Kim, 2016; Park et al 2014). Perceived usefulness was found to have an impact on social media usage (Hsiao et al 2016) and attitude. While H5, towards habit was found not significant. This can be explained that when students perceived such technology to be useful, he or she might not develop a habit towards using social media. It would not develop automatic or natural usage of social media. Attitude as expected found to be significant on social media addiction. This is supported by previous studies on the positive correlation of attitude on social media addiction (Bailey et al 2018).

Within the TAM model, it is evident that TAM variables are strong predictors of social media addiction among young adolescents. Despite the emergence of TAM's successors such as UTAUT and UTAUT2 in explaining an individual addiction, TAM is considered to be fundamental in user's adoption of technology where issues of biasness are non-existence compared to UTAUT and UTAUT2 (El-Masri & Tarhini, 2017).

Habit was significant on social media addiction. It shows that a user's habit and addiction have distinct cognitive roots related to the adoption of social media (Seo and Ray, 2019). The continuance usage of habit would ultimately lead to the needs of social media in autonomous mode. This study has integrated both addiction and habit into one model to understand the goal-driven domain of habit and inflated desire of addiction (Seo & Ray, 2019). Most of the previous studies had divided addiction and habit into two distinct domains that may cause a separated indication between social media compulsive and positive engagement.

5.2. Flow theory

Consistent with previous studies, this study found that enjoyment has a positive impact on usage habits (Liu et al., 2018; Yang et al., 2016), and satisfaction (Aluri et al 2016). Individuals experiencing a sense of joy would further attach to their behavior and action. As flow theory is concerned, one would be in a state of flow when he or she is fully concentrating on such activities supplemented with enjoyment. Social media is perceived as an entertaining tool especially for young adolescent can reduce boredom and fulfill one loneliness (Tandoc et al 2015). As using social media can be a hedonistic experience, happiness is increase as an individual will experience positive emotion (Mongrain et al 2015). Nonetheless, prolong engagement and dependency on technology, despite inducing positive emotion can be a backfire with several negative consequences. Happiness is perceived to be a short time in fulfilling one contentment at a juncture in time.

Previous studies have shown that satisfaction showed a significant influence on social media addiction (Longstreet and Brooks, 2017). As stressed by the author, deep-rooted issues in one life that lead to increased addiction to technologies and internet related devices. Despite picturing a negative connotation of user satisfaction, Hu et al (2015) depicted that satisfaction is essential for providing positive experience in using social media. It is important to identify factors that satisfy customers to make them coming back for social media usage. It can provide a customer value perspective within the information systems (IS) theory. Satisfaction has shown to be a mediator in Chen's (2019) study. It shows that satisfaction is influence by attachment anxiety, as a contrast to the role of happiness on social media use.

5.3. Theoretical implication

This study is among the first of its kind to provide empirical evidence on individual social media addiction, as an integration of TAM and flow theory. The typological nature of human beings in adopting social media is well documented within the scope of TAM. While the flow theoretical foundation of human being, embedded within satisfaction and self-efficacy delineate the cognitive influence of one addiction toward social media. Social cognitive theory, on the other hand, justifies the importance of individual intrinsic antecedents within self-efficacy and optimism. The integration of these three theories would lay the theoretical foundation explaining social media addiction within the

scope of positive antecedents. Despite the foundation of social media addiction is perceived to be of negative magnitude, the antecedents from the three theories are regarded as positive variables. Linking these would provide future assessment of social media addiction into rather positive ground such as social media engagement.

Flow theory, on the other hand, accommodates this study within the scope of determining factors that lead to user's enjoyment and concentration on social media. These two variables are the most studied within the flow variables that according to different scholars contain 4 to 6 variables that determine one flow on certain focused action (Zaman et al 2010; Guo & Poole, 2009; Hausman & Siekpe, 2009). Drawing on the result, flow theory is substantial in explaining young adolescent engagement with social media from the scope of enjoyment and happiness that provide a significant correlation on social media satisfaction.

5.4. Practical implication

Technology addiction can impart serious consequences on one's life and need proper treatment to overcome such addiction (Yang et al., 2016). This addiction is contributed by one habitual attachment due to the frequent use of social media. As noted that habitual behavior is different from technology addiction as it shows the reflection of one action with regards to learning and habit is an automatic behavior that depends on the psychological aspect. Habit is a manifestation of reflexive action where people automatically performed action based on learned behaviors (Osatuyi & Turel, 2018). The action reflecting habitual response is fast with automatic reaction in the absence of awareness by responding to cues (i.e. message notification or cellphone beep).

Addiction to social media is more prevalent, especially on young adolescents. The impact on this group would be most devastated if no control measure is taken. Practically, students are well placed on campus where there are under the watchful eyes of university authorities. Limiting the use of free internet and Wifi would hinder students to spend plenty of time on social media. Another way is by limiting or blocking social media sites. A delicate way is by only allowing it within a certain period, in which students can focus their time and energy on studying. An environment of awareness should be always shared and knowledge on the detrimental consequences should be shared as university serve as the pinnacle of knowledge exchange within the community (Fauzi et al., 2019b).

The detrimental impact of social media addiction is to an academic problem, time management and reality substitute (Hong et al 2012). Time management problems is realized when only students have spent so much time and could not use to other more important matters. Time management would also impact their sleep and lead to deprivation. It is also inevitable that students are unable to reduce phone time usage. The main practical implication from this study is that student engagement in social media as psychological cursor which is not intended for academic-related activities. The learning process may be distracted as a young adolescent can be highly attached to social media via smartphone in class (Alt, 2015).

6. Conclusion

In a nutshell, this study has shown that some antecedents of social media are more relevant and impactful than others. From the TAM perspective, students perceived usefulness is found to be higher than PEOU on attitude toward social media. Habit is seen to have a significant impact on social media addiction as the habit of using social media is regarded as goal-driven, relative to addiction that is considered to be inflated desire to use. Within the scope of social cognitive theory, the theory is applied to validate the interaction factors of personal, environmental and behavior on individual behavior that are undermined within bidirectional influences among them (Zhang et al 2017). This study had shown that optimism and self-efficacy are the two most significant predictors in describing one addictive behavior in using social media underlies by social cognitive theory. Meanwhile, flow theory provides an essential connection to how young adolescents are indulging in social media by spending relentless hours. It explains how enjoyment and concentration are decisive in interpreting the compulsive behavior. Thus, this prevalent issue requires further study to classify and develop a

substantial model that can mitigate and abate the dreadful impact of social media addiction.

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