

A Systematic Review on Factors Influencing Mobile Phone Addiction among Youths in Asean Countries

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Abstract

Mobile phone addiction has become one of the main issues today affecting youths in ASEAN countries. There have been limited systematic reviews than most on the social perspective of mobile phone addiction among youths, thus the lack of related articles call for a focus on systematic review related to mobile phone addiction among youths in ASEAN countries. This systematic review is guided by PRISMA Statement (Preferred Reporting Items for Systematic reviews and Meta-Analyses) as it offers current state of understanding on a topic. Based on the systematic review on Scopus, seven related studies were chosen. Three main themes of mobile phone addiction among youths were identified, namely: communication, visible design, entertainment and leisure. From the three main themes, nine sub-themes have emerged. Future studies are recommended to place their focus on qualitative study, extend studies in Brunei, Cambodia, Indonesia, Laos, and Myanmar. In the future, studies should focus on determining the statistics of mobile phone addiction among youths in ASEAN countries.

Keywords: Systematic Review, Mobile Phone, Addiction, Youth, ASEAN Countries.

Introduction

Nowadays, mobile phone is no longer considered a luxury item, but rather a basic need to people all over the world. Regardless of the geographical location of people living in urban or rural regions, people feel dependence on mobile phones. According to the World Bank (2012), around three-quarters of the world's inhabitants now have access to mobile phones. This demonstrates the importance of mobile phones nowadays. Mobile phones offer several advantages to their users such as the opportunity to communicate over long distances (Hahn & Kibora, 2008),

poverty alleviation (International Telecommunication Union, 2006), reduce inflation and increase productivities (McConaughy, 2001).

Despite offering a variety of purposes, mobile phones are reported to cause negative effects if not handled effectively. Some of the reported risks of mobile phones usage are distraction while driving (Green, 2001), and the electromagnetic radiation emitted from the device (Sandstrom et al., 2001). Moreover, mobile phone users are also vulnerable to developing mobile phone addiction (Lee, 2002). Mobile phone addiction is categorized as technology addiction, a typical behavioral addiction in the repetitive use of mobile phones, which are counter-productive to health (Li Chen et al., 2016). This addiction causes people to feel uncomfortable and irritated if mobile phone access is removed from them. As a result, people become obsessed and attached to their mobile phones (Wikle, 2001) and heavily depend on the device (Licoppe & Heurtin, 2001).

The gratifications of mobile phone usage have become an addiction for its users; among them are entertainment, instrument, companionship, immediacy, self-actualization, and privacy (Bae, 2001, 2002; Sung & Choi, 2002). Drawing on Davazdahemami et al. (2016), mobile phone addiction can be understood from two perspectives which is an overuse to technology (conflict, withdrawal, relapse, and behavioral salience) and believes that it is a form of behavioral addiction (addiction to gaming, shopping and gambling).

Although, mobile phones have become an important subject today, the social and cultural impacts of its usage have failed to attract the vast attention of global academicians (Katz & Aakus, 2001). Most of the existing studies nowadays focus on mobile phone usage instead of the level of addiction to it (Oulasvirta, Rattenbury, Ma, & Raita, 2012) and most of them focus on the western region. Due to this gap, there is an issue regarding the level of mobile phone addiction among youths, especially those living in ASEAN countries.

To construct a relevant systematic review, this article is guided by the main research question – what are the factors that influence mobile phone addiction among ASEAN youths? Hence, the main focus of this systematic review is placed on youth's mobile phone addiction and a special focus is put on ASEAN youths as this group has the highest mobile phone usage in Southeast Asia (Malaysian Wireless. 2018). Only youths from ASEAN countries (Malaysia, Indonesia, Philippines, Singapore, Thailand, Vietnam, Laos, Brunei, Cambodia, and Myanmar) are included in this systematic review.

To fill in the gap, this review will analyze existing literatures in a systematic way focusing on factors that influence mobile phone addiction amongst ASEAN youths. In order to discuss this matter, this article is divided into four sections. The first section explains the purpose of conducting a systematic literature review while the second section provide details on the method used whereby a PRISMA Statement (Preferred Reporting Items Systematic Reviews and Meta-Analysis) was referred. The third section systematically reviews and synthesizes the identified literatures on factors related to mobile phone addiction and the last section summarizes the paper by discussing recommendations for future policy and future research needs.

Systematic Review Framework

Statistically, numerous reports were made on the negative impacts of mobile phone addiction. Previous studies strongly support the negative impact of mobile phone addiction on productivity and physical facilities (Miakotko, 2017), on students' academic performances (Suryanarayana, 2015), and gravely that mobile phone usage can cause brain tumors (Health Evidence Network, 2006). These issues have attracted several scholars to conduct related studies regarding mobile phone addiction and one way is to systematically review it. Systematic review can be interpreted as an examination of a clearly formulated question that uses systematic and explicit methods to identify, select, critically appraise relevant research studies, and analyze their data.

'Rigorous search' is the methodology used to run systematic reviews; this method allows the identification of gaps and determines the direction for future research. Health research is simultaneous with systematic review; reviews within psychological studies regarding mobile phone addiction are rarely found. Due to limited resources of reviewed articles on social perspectives regarding mobile phone addiction, a systematic literature review was performed (e.g., databases searched, articles excluded, search terms used). It is important to develop a systematic review on social perspectives regarding mobile phone addiction since it is a growing phenomenon in ASEAN region (GSMA, 2016). It is important for researchers to understand the current pattern of existing studies on mobile phone addiction as it helps the understanding on how to counteract the negative effect of mobile phone addiction effectively. Putting focus on ASEAN countries is important because these developing countries need place full force of their human capital; they cannot afford to deal with the negative effects of addiction (salience, withdrawal, conflict, relapse and reinstatement, tolerance, and mood modification) among their citizens (workforce).

Methodology

The main focus for this section is the rigorous methods to retrieve related articles on the factors influencing mobile phone addiction among ASEAN youths. PRISMA is the tool that has been utilized to run the systematic review process (i.e. identification, screening, and eligibility), data abstraction, and analysis.

PRISMA

PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) is used to guide this systematic review. The reason for using PRISMA as guidance is because it helps define a clear research question that permits a systematic research, it identifies the inclusion and exclusion criteria by examining a large database of peer-reviewed literatures, which includes a wide range of scientific journals in a defined time frame. The advantage of using PRISMA is the fact that this systematic review will go through a meticulous search on topics related to factors influencing mobile phone addiction among ASEAN youths. The extracted articles will then be coded for future management reviews.

RESOURCES

The search was done through Scopus. Environmental sciences, social sciences, psychological, and biological studies are some of the relative subject areas included in this database. There are more than 22,800 journals from 5000 publishers worldwide, which make Scopus one of the largest abstract and citation database of peer-reviewed literature.

ELIGIBILITY AND EXCLUSION CRITERIA

The inclusion and exclusion criterion related to the type of literature, language, timeline, countries, and regions for this systematic review were determined (Table 1). This paper focuses on primary sources and extracts empirical studies over mobile phone addiction issue. Based on the reason of language proficiency, only articles published in English are included. The articles reviewed were filtered within a timeline of 2007-2018 (12 years), and in tandem with the paper's objective, only ASEAN focused articles are included in the review.

Table 1: The Inclusion and Exclusion Criteria

Criterion	Eligibility	Exclusion
Literature type	Journal (research articles)	Journals (systematic review), book series, book, chapter in book, conference proceeding
Language	English	Non-English
Timeline	Between 2007-2018	<2007 and >2018
Countries and territories	ASEAN countries	Non-ASEAN countries

SYSTEMATIC REVIEW PROCESS

There are four stages in executing a systematic review process (Traneld et al., 2003). The reviewing process was carried out on the 5th of April 2018 (at 12.32 o'clock). First of all, several related keywords for the search process were identified. Synonyms to the keywords related to mobile phone addiction (as been shown in Table 2) were acquired through previous studies and thesaurus.

Table 2:

The Search String Used For the Systematic Review Process

Databases	Keywords used
Scopus	(psycholog* OR emotion* OR intellect* OR mental* OR subjective*) AND ("mobile phone*" OR mobile telephone* OR cellular telephone* OR cellular phone* OR car phone* OR car telephone* OR cell phone* OR cell telephone* OR digital phone* OR digital telephone* OR radiotelephone* OR radiophone*) AND (addict* OR crave* OR dependent* OR enslave* OR fixation* OR hang-up* OR hook* OR inclination* OR jones* OR obsess*) AND (youth* OR teen* OR adolescent* OR bloom* OR boyhood* OR minor* OR childhood* OR girlhood* OR Immature* OR juvenescence* OR puberty* OR young*) AND NOT (medicine OR "medicine subject area")

ARTICLE AVAILABLE AFTER SYSTEMATIC REVIEW PROCESS

As a result, 12 articles emerged from the search string in Scopus. However, only seven articles passed the screening and eligibility processes. The seven final articles are obtained since one the articles (Mobile Phones and the Cultural Ecology of Fishing in Kerala, India) did not fit within the ASEAN context, one article (Gender and social resources: digital divides of social network sites and mobile phone use in Singapore) is not open access and cannot be obtained from any subscribed database by Universiti Putra Malaysia, and the other three articles were excluded because their data do not fit in this systematic review.

Table 3:

The Articles Selected For This Systematic Review

No.	ARTICLE	AUTHOR	
1	The influence of cellular phone attributes on users' affective experiences: A cultural comparison	Seva & Helander (2009) – Philippines and Singapore.	✓
2	The influence of social and cultural factors on mothers' domestication of household ICTs – Experiences of Chinese and Korean women	Lim & Soon (2010) – China & Republic of Korea.	x
3	Mobile phone appropriation of students and staff at an institution of higher learning	Abdul Karim et al. (2010) – Malaysia.	✓
4	Mobile Phones and the Cultural Ecology of Fishing in Kerala, India		x
5	Exploring the relationship between urbanized Malaysian youth and their mobile phones: A quantitative approach	Balakrishnan & Raj (2012) – Malaysia	✓
6	Gender and social resources: digital divides of social network sites and mobile phone use in Singapore		x
7	Testing the moderating role of need for cognition in smartphone adoption	Cho & Park (2014) – Singapore.	✓
8	Towards an understanding of intention to use mobile videos: Impression management, perceived facilitation, and social norms	Lin et al. (2014) – Singapore.	✓
9	Grasp and index finger reach zone during one-handed smartphone rear interaction: effects of task type, phone width and hand length	Lee et al. (2016) - Republic of Korea.	x
10	Gender differences in mobile phone usage for language learning, attitude, and performance	Hilao & Wichadsee (2017) – Thailand.	x
11	Generating travel-related contents through mobile social tourism: Does privacy paradox persist?	Hew et al. (2017) – Malaysia.	✓

12	Who's calling? Social networks and mobile phone use among motorcyclists	Gruyter et al. (2017) – Vietnam.	✓
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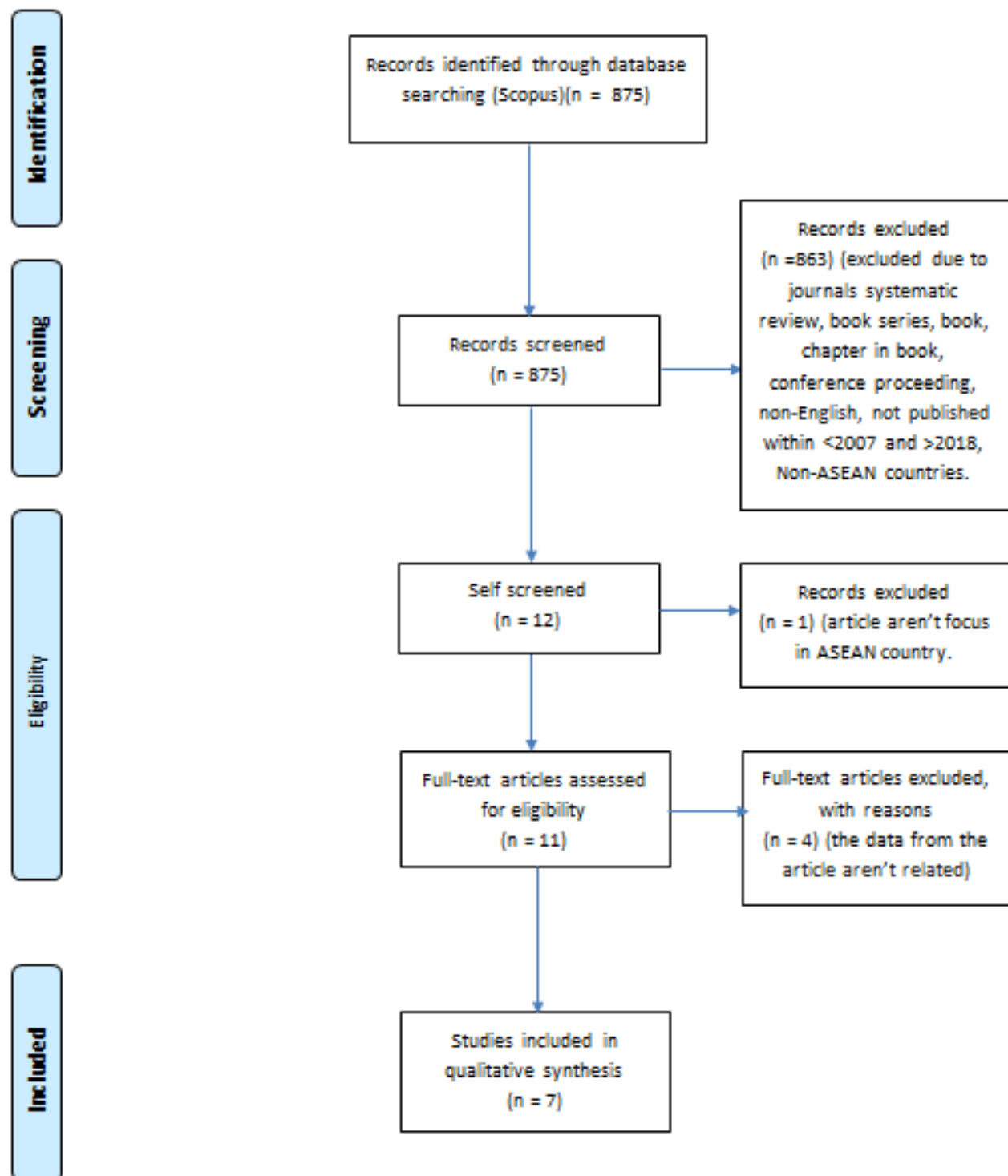


Figure 1: The flow diagram of the study (adapted from Moher et al. 2009).

Data Abstraction and Analyses

After the systematic review process, only seven articles were selected. These articles were assessed and analyzed based on the formulated question earlier. During the screening phase, 863 articles were excluded because they have no relevance on the basis of its literature type, language, timeline, and countries/ territories. One article was excluded during the first phase because the full text cannot be found by the researcher. In the second phase, four articles were excluded because their data are not related to this review. Data from the selected articles were extracted, afterward the key themes were developed using content analysis. To ensure a smooth analyzing process, the abstracts were first examined before the full articles (in-depth) were analyzed in order to achieve appropriate codes, categories and themes. Later the categories were coded based on themes, which was established by typology from the selected articles.

Result

The review resulted in three main themes and nine sub-themes related to factors influencing mobile phone addiction. The three main themes are communication (four sub-themes), visible design (three sub-themes), and entertainment and leisure (two sub-themes). The results can be referred in Table 5. The results provide a comprehensive analysis of the current factors influencing mobile phone addiction among youths in ASEAN countries.

There is one study that focus on youth in Philippines regarding factors influencing mobile phone addiction (Seva & Helander, 2009), three studies focus on mobile phone addiction among youth in Singapore (Seva & Helander, 2009; Lin et al., 2014; Cho & Park, 2014), three studies focus on mobile phone addiction among youth in Malaysia (Abdul Karim et al., 2010; Hew et al., 2017 and Balakrishnan & Raj, 2012), and one study focus on mobile phone addiction among youth in Vietnam (Gruyter et al., 2017).

In addition, there are six quantitative research studies and one mixed method (qualitative + quantitative) research study. To the author's knowledge, there is no identified qualitative study in this search string. The publication dates of the selected articles range from 2009 until 2017.

Table 4:

The Findings

COMMUNICATION	VISIBLE DESIGN	ENTERTAINMENT AND LEISURE
TT = Text and Talk	FA = Functional Attribute	EP = Entertainment Purpose
SC = Socially Connected	AA = Aesthetic Attribute	TA = Tourism Activities
PS = Personal Safety	SS = Social Status	
BN = Business Needs		

Table 5:
The Findings

	MAIN STUDY DESIGN	COMMUNICATION				VISIBLE DESIGN			ENTERTAINMENT AND LEISURE	
AUTHOR/ COUNTRIES		TT	SC	PS	BN	AA	FA	SS	EP	TA
Seva & Helander (2009) – Philippines and Singapore.	QN					✓	✓			
Abdul Karim et al. (2010) – Malaysia.	QN	✓	✓	✓	✓			✓	✓	
Balakrishnan & Raj (2012) – Malaysia.	MM		✓	✓						
Cho & Park (2014) – Singapore.	QN		✓							
Lin et al. (2014) – Singapore.	QN		✓							
Hew et al. (2017) – Malaysia.	QN		✓	✓						✓
Gruyter et al. (2017) – Vietnam.	QN	✓	✓							

Potential Factors Influencing Mobile Phone Addiction

This section concentrates on the main potential factors influencing mobile phone addiction among youths in ASEAN countries such as communication, visible design, and entertainment and leisure.

a) COMMUNICATION

All seven studies focus on the factor of communication. According to six of the seven studies, the most common form of communication that leads to mobile phone addiction is being socially connected. The second sub-theme that emerged from three studies is personal safety, the third sub-theme that emerged from two studies is text and talk, and finally, the fourth sub-theme that emerged from one study is business needs (Table 5).

- Socially Connected

Social connection is one of the communication factors that lead to mobile phone addiction among ASEAN youths. To fulfil their needs, people get socially connected with their friends via mobile phone. They become addicted to mobile phones because it allows them to gossip,

disclose personal information, and share emotions with others (Karim et al., 2010). Furthermore, it keeps them in touch with each other while making, arranging, and canceling appointments. Gossiping can improve one's social network, mobile phones enable youths to easily and quickly contact others despite geographical distance or time constraints (Balakrishnan & Raj, 2012). Studies by Hew et al. (2017) found that virtual communities to be a relating factor that leads to mobile phone addiction. Virtual communities help develop a sense of belonging among youths by delivering the feelings of warmth, belonging, and excitement.

A study in Singapore also shows that addiction to mobile phones can be caused by communication that is lead from alternative decision processes, as a communication device mobile phones can be of help for youths to make better decisions with reasoning, judgement, and problem solving (Cho & Park, 2014). Another study in Singapore shows that three issues have arisen in the cause of mobile phone addiction among youths, which is caused by communication as a subjective norm, attitude, and perceived behavioral control. Subjective norm can be referred to the influence of cultures and population towards mobile phone addiction, attitude refers to self-behavior towards mobile phone addiction, and perceived behavioral control is an outcome of subjective norm and attitude. The study found that the greater the perceived behavioral control, the stronger the intention of an individual to perform the behavior (Lin et al., 2014).

The last study regarding social connection as a communication factor that influences mobile phone addiction was conducted in Vietnam. This study indicates that mobile phone addicted youths share similar attitudes, and the term 'homophily' is used in this study. The term 'homophily' can be defined as the sharing of common social attributes, in which individuals or groups who are more homophilous towards each other are more likely to be socially connected (Gruyter et al., 2017).

- **Personal Safety**

A study in Malaysia has indicated that emergency contact is one of the factor influencing Mobile phone addiction. The study by Abdul Karim et al. (2010) found that under aged youths have safety issues when socializing. They are more likely to engage in individual outings mostly for socialization or task accomplishment, and frequently in need of the gadget for safety and emergency needs.

Balakrishnan & Raj (2012) also indicated the same thing, their study suggests that personal safety issues as one of the factor that leads to mobile phone addiction, they found it to be more prevalent among female Malaysian youths. Female youths were using their mobile phones as a device for security, particularly when left alone at night as they are able to quickly contact others should an emergency arise.

A study by Hew et al. (2017), which is also conducted in Malaysia used the term privacy paradox to explain about personal safety issues that cause mobile phone addiction. This term

indicates that social media users still share personal information despite personal privacy concerns because of traveling/ tourism, when youth go for traveling they tend to share their experience using picture and post through mobile phones. This act can affect their privacy. Youth seem like didn't worry about personal safety even though their personal information has been shared publicly.

- **Text and Talk**

Abdul Karim et al.'s (2010) study in Malaysia indicated that text and talk have influenced youths to get addicted to their mobile phones. This study found that younger age group mobile phone users engage more in social activities and SMS because of its cost saving factor.

Another study in Vietnam also mentioned text and talk as one of communication factors that lead to mobile phone addiction. This study reported that 90–91% of youths were using their mobile phones for talking and/or text messaging while driving, the results for young motorcyclists are still alarming despite the vulnerability of being road users compared to young drivers. Granted the fact that a motorcycle generally requires more control to maneuver than cars (Gruyter et al., 2017). Despite all these facts, they still text and talk while driving; this is simply because phone usage is a proven distraction since the gadget help them feel connected to social relationships- young drivers tend to communicate by phone with friends and family even while driving.

- **Business Needs**

Abdul Karim et al. (2010) study in Malaysia indicated that business needs have played a part in influencing youth's mobile phone addiction. This study found that youths who use mobile phones are likely to engage in various business activities, but the tendency to engage in business transactions are most likely higher among the working-class youths. This is because students are dependent on their parents, they are expected to give priority to their studies rather than engaging in business matters.

b) VISIBLE DESIGN

Two out of the seven studies focus on the visible designs of the phone as a factor that influenced mobile phone addiction. This systematic review found that one study stated the factors for youth in ASEAN country addiction towards mobile phone is because of functional attributes of mobile phones and aesthetic attributes while another study stated the mobile phone's social status as the factors (Table 5).

- **Functional Attribute**

Seva & Helander (2009) suggested in their study that functional attributes in a mobile phone can cause addiction. The functional attribute refers to the area of the body; the smaller the body the smaller the screen size, this means physical comfort may (or may not) be correlated to cognitive comfort. This study characterized youth as sophisticated individuals who look for the best value for money. They are more demanding when it comes to technology and are

more particular in their choice of products. Interactions with youth during the study provided the impression that mobile phones with advanced technical features are preferable. Such preference also indicates that youths are more open to new technologies.

- **Aesthetic Attributes**

A study in the Philippines and Singapore indicate that aesthetic attribute is one of the factors for mobile phone addiction. A study by Seva & Helander (2009) found that a mobile phone flamboyance and unique personality strongly attract youths. The information in this study shows the need for youths to be amazed at the product. The design of mobile phones attribute enhances emotions that will drive a specific set of youth to get mobile phone addiction. The design must be able to cater to an advanced technological concept that is embodied in a thin body, small display area, and additional features. The concurrence of findings confirms that the influence of physical product attributes can influence attraction and emotion, which can lead to mobile phone addiction.

- **Social Status**

A study by Abdul Karim et al. (2010) on Malaysian youth indicates that social status can influence their mobile phone addiction. This study suggests that youths that socialize are more likely to buy physically attractive mobile phones as well as other qualities the gadget offers (an example is high cost) since its existence can uplift their social status.

c) **ENTERTAINMENT AND LEISURE**

Two out of seven studies stated that entertainment and leisure is a contributing factor that influences mobile phone addiction (Table 5).

- **Entertainment Purpose**

The study based in Malaysia by Abdul Karim et al. (2010) found that generally youths would use their mobile phones to listen to music; this may imply that students mostly use the gadget to entertain themselves. Mobile phones can be considered as a tool that has been used for hedonic purposes, the existence of music and camera has led to the addiction of mobile phones among youths.

- **Tourism Activities**

A study in Malaysia indicates that tourism activities are one of the factors for mobile phone addiction, Hew et al. (2017) found that youth tourism with the existence of mobile phones can be time saving, convenient and have an economic value in certain situations. Youth travelers have hedonic style in their use of mobile phone while travelling. When travelers share photos of themselves, it allows them to interact with other travelers and form mutual understandings in an online environment while instilling a sense of belonging. The familiarity of other travelers through personal exposure will lead to a higher sense of belonging in travel and tourism related social media sites. The sense of belonging is the factor that makes mobile phone addiction eminent among youths.

Discussion

This systematic review attempts to analyze the existing literature in a systematic way, which focuses on the factors that influence mobile phone addiction among youths in ASEAN countries. Mobile phone addiction among youths today have become as close as a mental disease, studies to minimize its impact needs to be done so that remedies can be seized. Rigorous reviews on the database of SCOPUS have resulted in 10 articles related to mobile phone addiction among youths. There are diverse factors that influence mobile phone addiction among ASEAN youths. Within the scope of this systematic review, three main themes and nine sub-themes have emerged. Communication, visible design, and entertainment and leisure are the three apparent factors that influence youths' mobile phone addiction.

Technology development has allowed today's communication to evolve, with the existence of mobile phones, people are able to communicate regardless of their geographical boundaries. The existence of mobile phone has made the world virtually smaller and globally, youths are able to receive information first hand in any situation. Usually, youths are the first to know of any new incidents and events that occur across the globe, either in a form of politics, entertainment or economy. However, due to curiosity they become so attached to their mobile phones and failed to control the volume of their usage, hence it consequently led to addiction. Within the scope of social relationship, mobile phone addiction lessens the time spent with their family members and colleagues, this in turn affects their social bonding. The review also found that youths are heavily attached to their mobile phone for safety purpose. The safety concern will prompt the individual to bring their mobile phones at all times as the device allows them to contact their family members or friends for immediate help.

Today mobile phones are also used as a social status indicator because of its visible design. This gadget is designed with special functional attributes, aesthetic attributes and attractive shapes. This condition allows users, especially youths, to gain higher social status among friends when they have better mobile phone models. A study by Ito (2005) found that mobile phone usage in the United Kingdom, Finland, Norway, and Sweden shows a similar pattern of higher mobile phone usage among youths in their country. Scientific proof shows that the reason youths are using mobile phones are because of its features (design, device size, and image quality), this attribute makes them feel superior (KISA, 2015). The gadget is the main device for youths to seek personal and formal matters. When every youth has the same gadget, they will eventually compare it with one another; usually the gadget with special attributes will impress others. This systematic review found that the functional and aesthetic attributes of mobile phones are important for them to gain higher social status among friends. Mobile phones do not just need to look attractive, but they must offer attractive functions. The presence of a clear-cut camera and size of the frequently used buttons are the most functional attributes sought after among youth mobile phone users. As for aesthetic attributes, youth mobile phone users will look at the shape of the navigation button, width of display, ratio of body weight to height, and the number of colors it comes in.

Entertainment and leisure is another factor for mobile phone addiction. Mobile phone allows its users to access music from all around the world via internet, there are several applications specifically for music lovers like 4shared, Spotify, and Sound Cloud. Some of these music applications are free and some are not, but still mobile phones are not limited to certain music genre or ethnicity. Youths are able to explore all kinds of music even the ones they never hear and this makes them spend more time on their phone and becoming addicted. Another captivating mobile phone characteristic is the availability to constantly browse videos and pictures through applications such as YouTube, Facebook, and Instagram. Youth mobile phone users are also able to share new movies in video applications; those who like to watch free movies and refuse to spend money on cinema tickets will spend most of their time watching movies via mobile phones. Youths usually like to travel and prefer tourism related activities. Owing to the proliferation of mobile phone and mobile social media applications, travelers especially, are beginning to consume and create smart experiences pertaining to their travel experiences. This systematic review has found that social media serves as an important reference for other travelers. The rapid growth of mobile technologies, particularly smartphones, has implications among travelers while they are travelling. Youths that plan to travel trips will spend their time to search about other traveler's experiences using their mobile phones, sometimes they like to browse other people's travel pictures and videos because they want to experience the feeling of travelling. This activity will invigorate their addiction to mobile phone usage.

What Next?

Although this systematic literature review tries to examine all Scopus articles related to mobile phone addiction among youths in ASEAN countries, it is still lacking in terms of other research areas that need to be given attention. This systematic review found that most of the studies are quantitative in nature (six) and only one study uses a mix method. Future studies should consider using qualitative study/ interpretivism paradigm. A qualitative perspective could offer a meticulous and more detailed explanation on the reasons for youth's addiction towards mobile phone usage. Quantitative studies can only provide the facts and numbers of youths involved in mobile phone addiction, but the reason and feeling behind their mobile phone addiction can only be explained using a qualitative study. Furthermore, the strategy to counter mobile phone addiction among youths need be put into further consideration by means of new studies in the future.

Not many studies are found in certain ASEAN countries. Out of seven studies reviewed, there is no published article on mobile phone addiction in other ASEAN countries such as Brunei, Cambodia, Indonesia, Laos, and Myanmar; therefore, in the future scholars should focus on these countries. As previously stated, Asia Pacific (including ASEAN countries) are the fastest expanding region in mobile phone usage. This rapid development can bring positive and negative effects among youths residing in Asian Pacific regions; it is a smart move to predict this development via proper study so that any unforeseen situation can be avoided. Having more studies regarding this matter will produce empirical data on how and what kinds of situations do mobile phone addiction exists in ASEAN countries as of present and also in the future. It is still unknown about

the statistics of youth mobile phone addiction in ASEAN countries, without the real numbers how can mobile phone addiction be ratified.

Conclusion

Several studies have forecasted that mobile phone addiction can bring negative impacts and elicit a hedonistic lifestyle towards youth in ASEAN country. The review is guided by PRISMA Statement (Preferred Reporting Items for Systematic reviews and Meta-Analyses), which allows a rigorous and systematic search on articles related to mobile phone addiction among youths in ASEAN countries. In conclusion, this review has contributed much-needed information by identifying in general four themes related to communication, education, visible design, and entertainment. Delving deeper into each theme, this systematic review also identified nine sub-themes related to each theme. Future studies should place more focus on qualitative study on youth's mobile phone addiction focusing in other ASEAN context such as Brunei, Cambodia, Indonesia, Laos, and Myanmar. The present article provides detail on the review process (e.g., databases searched, articles excluded, search terms used), which can be referred by future scholars for reference and validate the interpretations or examine its comprehensiveness.

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