

Exploring Problematic Smartphone Use (PSU) among Muslim Adolescents in Southern Thailand: Students and Parents' Insights

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Abstract This study aimed to explore problematic smartphone use (PSU) among young Muslim students in Southern Thailand. This research employed a dual-perspective, phenomenological approach, examining PSU from the perspectives of both adolescent Muslim students and their parents. We interviewed 10 participants, through purposive sampling, comprising 5 adolescent Muslim students studying in Southern Thailand and their respective parents. The qualitative data collected was then subjected to thematic analysis.

Four themes emerged from the thematic analysis. Each theme was further explored and discussed based on its categories and subcategories. The first theme, "Primary Purposes of Using Smartphones", consisted of: learning, communicating, and relaxation. The second theme, "Types of PSU", included overusing smartphones and dysfunctional habits. The third theme, "Negative Impacts of PSU", encompassed physical effects and losing control. The last theme, "Reasons for PSU", was composed of psychological needs and low regulation as its categories.

Moreover, the study highlighted similarities and differences in perspectives on these themes between Muslim adolescents and their parents. The findings and limitations of this research are presented to suggest potential directions for future study and implications.

Keywords Adolescent; Muslim students; Problematic Smartphone Use (PSU); Thailand

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Introduction

As the prevalence of smartphone use increases, these devices have become the most popular among all ubiquitous electronic gadgets (Yang et al., 2019). The dramatic growth in smartphone uses over the past five years, from 2016 to 2021, has been noteworthy. While 49.40% of the global population used smartphones in 2016, this figure rose to 60.69% in 2021 (Bankmycell, 2021).

A similar trend has been observed in Thailand. In 2020, approximately 53.57 million Thais used smartphones, accounting for 76.75% of the population—a significant increase since 2015 (Statista, 2021). Notably, a recent study reported that smartphone usage among university students in Northern Thailand reached an astounding 99.1% (Tangmunkongvorakul et al., 2019).

The computer-functions that smartphones provide are the main reasons for their rapid increase in usage (Yang et al., 2018). Its users easily download various smartphone applications for their daily needs, business, education, and other purposes. Importantly, smartphone use has become the most convenient communication tool for various activities, such as video calling, texting, posting, surfing the web, and social media sites.

Despite the advantages of using smartphones, overusing smartphones has evolved as a problematic behavior. Many labels have emerged for the behavior, such as “smartphone addiction”, “mobile phone addiction”, “smartphone dependence”, “internet addiction”, and “Problematic Smartphone Use (PSU)” (Kwon et al., 2013). Academic interest in these phenomena has increased recently. Billieux et al. (2015) argued that, despite the recent trend of associating excessive behavior with aspects of addiction, it was still injudicious to define excessive smartphone use as an addictive behavior.

Nevertheless, it should be noted that numerous studies reported the impairments of Problematic Smartphone Use (PSU), such as the physical impacts on health, psychological problems, and poor social relationships. For instance, recent research among university students in Northern Thailand reported a significant relationship between smartphone addiction and upper-body musculoskeletal symptoms (Hanphitakphong et al., 2021).

In addition, PSU adversely affected academic performance and led to academic procrastination (Liu et al., 2020; Yang et al., 2018). Buctot et al. (2021) found that daily time spent using smartphones on weekdays and frequency of use on weekdays significantly altered academic performance and perceived academic performance among Filipino adolescents.

An increasing number of studies have focused on today's adolescents, the first generation that has lived in the smartphone environment since their birth (Song et al., 2007). Although they handle smartphones easily, they are more vulnerable to reach to the excessive levels of its usage due to weaker self-control (Kim et al., 2014; Chun, 2018).

To the best of the researchers' knowledge, although some studies on PSU have been conducted in other parts of Thailand, no academic research has been conducted on the PSU among adolescent Muslims in Southern Thailand where Islamic culture is prominent. Moreover, most studies examining PSU among adolescents have adopted a quantitative approach and qualitative studies focused on self-reporting (Yang et al., 2019).

Therefore, this research adopted a phenomenological approach to investigate PSU among adolescent Muslim students in Southern Thailand. This approach is powerful as it uncovers phenomena by understanding subjective experiences and providing insights into individuals' motivations and actions (Lester, 1999). Additionally, this study delved into the issue on two levels, examining perspectives from adolescents and parents within the same family.

The present research explored the purposes of using smartphones, PSU types, adverse effects, and possible reasons for PSU among adolescents in Southern Thailand. Four specific questions were addressed: (1) what do the participants think about using smartphones? (2) why do participants or their

children use smartphones? (3) what maybe the problems or worries of participants or their children's use of smartphones? (4) how does PSU affect the participants or their children's lives?

Methodology

Participants

A total of 10 participants were recruited through purposive sampling to explore smartphone use among adolescents in Southern Thailand. Due to their intrinsic motivation, this research selected Muslim adolescent students and one of their parents who live in Southern Thailand as family units to participate. The total number of participants also nearly reached the recommended amount, as Knott et al. (2022).

Socio-demographic data are presented in Table 1. The study involved five families, each consisting of one adolescent and one parent. The participants included three middle school adolescents, two high school adolescents, three mothers, and two fathers. In two families, only one parent was responsible for raising their children, while in the other families, both parents shared this role. The ages of the adolescent participants ranged from 13 to 17 years, and the parent participants' ages ranged from 41 to 49. All parents had low educational levels, except one with a bachelor's degree. The monthly incomes of the participants' families were mainly reported as low, with one family self-reporting a middle-income status.

Table 1 Socio-demographic Data of Participants (n = 10)

FN	CoP	G	Age	Parenting status	LPE	Incomes
F1	P-1	F	53	One parent	Low (Grade 6)	Low
	K-1	F	14			
F2	P-2	F	50	One parent	Low (Grade 6)	Low
	K-2	F	13			
F3	P-3	M	59	Both	High (Bachelor)	Middle
	K-3	M	17			
F4	P-4	M	56	Both	Low (Grade 9)	Middle
	K-4	M	14			
F5	P-5	F	41	Both	Low (Grade 12)	Low
	K-5	M	15			

Note: FN= Family Unit Number; CoP=Code of Participant; G=Gender; PS=Parenting Status, LPE = Level of Parents' Education

Data collection

This study adopted a qualitative approach to fulfill the research purposes. Semi-structured interviews, guided by prepared questions, were the primary method used. Additionally, non-participant observations were applied to educate the phenomenon further. Thai was used for the interviews with eight participants, while English was used for two participants who were fluent in that language. Telephone and Zoom were used to interview all participants to prevent transmission of COVID-19.

The interviews were conducted in a private space to minimize distraction. Each interview lasted between 25-30 minutes, following the provision of informed consent to participate in this study. For the adolescent participants, parental approval was also obtained. All interviews were recorded using an electronic device, and transcripts were created in the original language of the interview. The main

author translated from Thai to English, and the entire author team reviewed all the transcripts to reach a consensus.

Data analysis

Thematic analysis was chosen for this qualitative data as it provides core skills and assures reliability and independence to the researcher (Braun & Clarke, 2006; Vaismoradi et al., 2013; Sundler et al. 2019). The qualitative data were analyzed in three steps, following the guidelines of Sundler et al. (2019). Firstly, the researcher read the entire transcript several times with an open mind until achieving a comprehensive familiarity; during this reading, the focus was on identifying novel and unique information. In the second step, meanings and themes were identified by examining differences and similarities and marking simple notes and keywords. In the final step, emerging themes were refined by organizing notes and keywords related to the identified meanings. Following the thematic analysis, both raw and analyzed data were presented to research advisors, and discussions were held until a consensus was reached among the researchers”.

Findings

Four themes emerged based on the thematic analysis: (1) primal purposes of usage, (2) types of PSU, (3) negative impacts of PSU, and (4) reasons for PSU. Table 2 presents the themes, categories, and subcategories. The themes were organized to identify patterns, overarching connecting similar meanings indexed as categories, and subcategories transformed from notes and words in the thematic analysis.

1. Primal purposes of usage

The primal purpose of using smartphone reported by both the adolescent and parent participants was a predominant theme; describing why adolescents should use their own smartphones. The theme was categorized into three: (a) learning; (b) communicating; and (c) relaxing.

1.1. Learning

In the Covid-19 outbreak situation, all regular courses of the adolescent participants were online. Moreover, they preferred using their smartphones to attend classes due to the convenience. All the adolescent participants similarly reported the learning purpose of using a smartphone. One participant said,

“I use my smartphone to study mostly and to communicate with my friends. We talk about homework and studying. Sometimes I need to join a group meeting for my study” (K-1, 14).

Three parents also stressed the benefits of using a smartphone for learning due to the abundant information and easy access beyond the limitation of places:

“If we want to see, we can see everything through a smartphone. For instance, if you want to watch football, you can see many things through it. If you want to study, you can also open YouTube and learn it. It depends on what you want” (P-5, 41).

“Everything is there. You can find what you want by using Google. In a second, you can find the information which you look for. If you know about new vocabulary and meaning, very simple. Search it!” (P-3, 59).

“In the phone, everything is there. It depends on our choice. We can find out vocational things. We can learn skills for jobs. Many things are in there. We can choose. Religions as well. Through a smartphone, we can do all things” (P-4, 53).

“They use for learning. Such as, art!” (P-3, 59).

Learning was the primary reason that all the participants asked their parents to buy a smartphone, except one who bought it himself (K-5). One father (P-4) decided to buy a smartphone for his son just before he went to a middle school:

“Nowadays, this generation needs to use a smartphone for their study. So, I bought one for my son, when he asked me for his studying” (P-4, 56).

1.2. Communicating

Communicating was mentioned by all the adolescent participants. They wanted to interact constantly with their peer groups, established due to studying and friendships. Importantly, the two female adolescent participants stressed this purpose:

“I want to talk with my friends all the time. Even if we are in different places. I would like to be connected by talking on the smartphone” (K-1, 14).

I mostly take photos with my friends, then play TikTok and Facebook Messenger” (K-2, 13).

The one male participant also presented a good example, of making healthy relationships among their studying peers through communication:

“When I join an assignment program, I can meet good friends. We are very transparent with one another. At first, we talk like a casual conversation. However, after that, we built a good relationship and became more transparent and open. We share our problems... Sometimes we discuss heartbreaks and loneliness. Yeah! We help each other” (P-3, 59).

Facebook Messenger was identified as the main application for communication by all the adolescent participants.

1.3. Relaxing

All the adolescents used their smartphones to relax when they finished studying or were free. The relaxing purpose of using smartphone was reported as follows:

“I use my smartphone for my study and entertainment. I watch YouTube. Mostly, I watch informative things. Moreover, I use a smartphone for my joy. However, I entertain informative and educational things” (P-3, 17).

“When I am tired, I would like to rest by using a smartphone... watching videos through smartphone makes me happy” (K-5, 14).

As seen above, using smartphones was a behavior to relieve them from their psychological tension. It was a method to enhance their emotional and psychological state and to reduce their psychological distress. Importantly, one parent participant strongly sympathized that using their smartphones would be one escape from their need:

“Relaxation! for their purpose. Because they are bored. It is escape from boredom” (P-3, 59).

In addition, their environment induced one adolescent to watch video clips on his smartphone as they did not have a TV.

Overall, the three purposes of using smartphones were stressed simultaneously by both adolescent and parent participants, as one participant (K-4, 15) reported clearly: “It (using a smartphone) is very easy to find information, and easy to communicate with friends. Also, we can rest through the smartphone”.

Table 2 Themes, categories, and subcategories

Theme	Categories	Subcategories
Primal Purposes of Using Smartphones	Learning	Online regular course Discussing on study Searching for educational informatic
	Communicating	Interaction Posting
	Relaxing	Resting Hobbies

Theme	Categories	Subcategories
Types of PSU	Over-using smartphones	Prolonged use Disruption of daily activities
	Dysfunctional habits	Access bad sites/contents Gossip about others
Negative Impacts of PSU	Physical effects	Losing eyesight Skipping eating Less-sleep
	Losing control	Mal-time management Academic procrastination
Reasons for PSU	Psychological needs	Belonging
	Low regulation	Anxiety Loneliness Adolescent Ambiguous rules

Note: PSU = Problematic Smartphone Use

Most importantly, the primary purposes of using a smartphone are health and functionality. Both groups of participants perceived the merits of smartphone use and linked it to its necessity in daily life. Interestingly, some parent participants highlighted the easy access to rich information through digital equipment on the palm in one hand, only if the choice of using it was right and sound.

2. The types of PSU

“The types of problematic smartphone use” was overarchingly themed to demonstrate their concerns over the adolescent participants’ smartphone usage. The parent participants emphasized this theme. Some of the adolescent participants also reported problematic usage.

2.1. Over-using smartphones

The problematic smartphone use identified by most participants was characterized as “over-using smartphones” and could be classified into two categories: (a) prolonged use and (b) disruption of daily activities. According to all participant’s reports, smartphone usage duration varied between 4 and 8 hours, excluding study time, and 8 to 12 hours, including regular study, particularly during Covid-19. Two participants reported their long-time usage of their smartphones:

“I think that they use their smartphone more than 10 hours” (P-3, 59).

“According to my smartphone, now I am using it around 12 hours a day including my study.

About 8 hours a day excluding my study” (K-3, 17).

The real situation among adolescents’ over-time using smartphones was observed by one adolescent participant, who reflected:

“Well. Ninety percent of my friends are addicted to a smartphone. We use a smartphone more than 12 hours a day” (K-3, 17).

Most adolescent participants made some reference to the over-using smartphone related to their and their friends’ usage, captured by two who mentioned the following:

“Mostly we stick to social media applications. Such as (Facebook) messenger. And using Instagram” (K-3, 17).

“I think that too-much-playing games is the problem. Some of my friends spend lots of time playing online games through smartphones... 5~10 % of my friends are addicted to playing games with smartphones” (K-4, 14).

Importantly, continuous usage of a smartphone was noticed without an internet/wifi connection by some of the participants who similarly reported: “I like to take photos when there is no internet connection. Selfies or group photos with my friends. And post them when I can use internets” (K-1, 14; K-2, 13).

One parent recounted the worries on their children’s over-using a smartphone:

“They use it too much. After studying, they use it until midnight, when they go to bed. When they have a meal, they are holding a smartphone with one hand. And they use the other hand for eating” (P-2, 50).

In addition, this problematic smartphone use pattern was reported when they gathered in a group, including pre-school age children, rather than playing together. One parent noted the risky situation: “They are very young. They play with a smartphone too much. Only in grade 1 or 2, even younger than this, do they play with it all the time. They only sit together and play on their smartphone” (P-1, 53).

2.2. *Dysfunctional habits*

Parent participants described the possibility that their children may develop dysfunctional habits, including accessing bad sites/ contents and gossiping about others. While all the parent participants accepted the above benefits of using a smartphone, they all mentioned that there are harmful sites/contents that their children could access without guidelines, two parents reported:

“We can access to bad sites, for example, gambling sites. There are some bad parts as well, although there are good sites...Also, becoming addictive to games are problematic. Addiction to gambling is not good as well” (P-4, 53).

“My son plays games by a phone, mostly. But he seems to play gambling- games. There are many games like that” (P-1, 53).

Long-exposure to harmful content may affect adolescents’ personality as, noted by one parent: “If you use too much smartphone and access bad content, it will develop some bad habits and will affect their personality. Unless they always good sites” (P-3, 59).

Furthermore, one adolescent disclosed habitual behaviors to access sexual content and gossip about others/cyberbullying might be widely popularized: “I think that it has become a norm (watching sexual content) to this generation. Cyberbullying is very common. Mostly, they gossip about other friends and talk to others behind their backs. So that we should be sensitive to talk about personal things on a chat group” (K-3, 17).

3. Negative impacts of PSU

A theme of ‘Negative Impacts of PSU’ emerged for most parent participants, reflecting their concerns about their children’s PSU and the adolescents in the area. The theme was categorized into two features: (a) physical effects; (b) losing control.

3.1. *Physical effects*

Most parents remarked on the physical impact due to over-usage of smartphones and watching the small screen. Most parents reported the negative impact on their eyesight: “If I use a smartphone for a long time, I feel the pain on my eyes” (K-4, 14). Although most parents perceived the merit of using a smartphone, they worried about the reduction of their children’s eyesight:

“Smartphone has merits and dis-merits. For instance, it is very useful for my kids’ study. They should use it for studying. On the other hand, it is troublesome when they over-use it. Their eyesight is getting worse. They cannot manage their time properly” (P-1, 53; P-2, 59).

Parents also reported the strong possibility of impacting their daily routines: skipping, eating and sleeping. One parent remarked:

“For instance, if you overuse smartphone, you forget to rest and forget to have food. That makes tendency doing that again and again” (P-3, 59).

3.2. *Losing controls*

Most participants described that PSU affected their daily life, school life, and self-control. Due to the over-usage of smartphones, adolescents may lose their balance in managing time, as one parent noted: “For instance, if you overuse smartphone, you can forget the time” (P-3, 59).

Interestingly, although the adolescent participants also reflected the risky situation, they regarded it as a small problem:

“I think that mal-managing time is problematic. I think that only 5 % of my friends have that kind of problem” (K-4, 14).

Whereas all the parents strongly held the belief that problematic smartphone use affects time management and educational aspects:

“They (my children) told me that they used their smartphone for their studying. But I do not really know what they were doing...if they use it too much, whey they could do homework and study” (P-2, 50).

4. Reasons for PSU

The last emergent theme was ‘Reasons for PSU’ among adolescent participants. It was identified that two categories contributed to the theme overarching: (a) psychological needs and (b) low regulation.

4.1. *Psychological needs*

Psychological needs were expressed as one reasonable category, causing problematic smartphone use. All the adolescent students remarked about the psychological need for using a smartphone; all female adolescents reported that using a smartphone was the catalyst for maintaining a sense of belonging with their friends. In addition, anxiety was identified as the reason of using a smartphone by one male adolescent:

“My recent problem, I feel anxious often. It comes personal problems with friends. Whenever I talk my personal problems with my friends. They will gossip about it behind back. Yeah! So, I always have a set of friends, my close friends. In this group, we are free. Those my friends, I can trust. But if I share my problem with others, they will gossip about it” (K-5, 17).

Moreover, loneliness was identified:

“It (watching football by smartphone) is funny and relaxing. We don’t have TV at home. It is escape from loneliness. Normally, when I have any problem, I want to talk about it with my friends. When I feel loneliness or any problems, I talk with my parents sometimes. But I talk with my friends through messenger” (K-5, 14).

An interesting finding was that the parent participants were indifferent or apathetic concerning their children’s smartphone use: “They are comfortable and easy. I do not understand and know why they use a smartphone too much” (P-1, 50). Although two parents remarked on the psychological need to use a smartphone to reduce tediousness, they did not display their thoughts toward the linkage and showed an indifferent attitude on this factor.

4.2. *Low regulation*

All the parent participants were aware that their children, as adolescents, had less self-control and should be cared of by their parents. One parent stated this point clearly:

“Normally, children they are still young. They don’t think that they need a break. They are very strong. But we have to remind them that this is the time to sleep, or to go some exercise, or to spend time with dad” (P-3, 59).

Interestingly, none of the parents in the five families identified specific and preventive guidelines for their children’s smartphone usage. In addition, none of the parents knew what kinds of applications or content their children used.

Remarkably, all the adolescents stated that they wanted to use a smartphone more and ignored the long-time usage; one student using a smartphone 7 hours a day, excluding schooling strongly reported: "I want to use a smartphone longer than now" (K-1, 13).

Discussion and Conclusion

The current qualitative research identified four overarching themes related to PSU: primal purposes of using smartphones, types of PSU, negative impacts of PSU, and reasons for PSU. Notably, smartphones were deemed indispensable by all participants in this study.

The results reveal that Muslim adolescent students in Southern Thailand use smartphones for learning, communicating, and relaxation, aligning with findings from recent research conducted in Western and Oriental countries (Yang et al., 2016; Nedungadi & Raman, 2021; Webster & Paquette, 2023). The accessibility to the internet via smartphones allows Muslim adolescents to use their devices similarly to students worldwide. Consequently, Social Networking Sites (SNSs) emerge as the primary platforms for achieving these purposes (Webster & Paquette, 2023).

It is worth noting that the risky behaviors associated with PSU, such as overusing smartphones and developing dysfunctional habits, were reported in this study and in recent research (Yang et al., 2019; Yoon & Yun, 2021). Importantly, the research indicates that both parent participants and even Muslim adolescents express concerns about the negative physical impacts of PSU.

However, three significant problematic issues in smartphone use among Muslim students emerge from the synthesis of the last three themes of this research. Firstly, 'time management' may affect their academic performance and future life, considering they are students (Kim et al., 2018; Yoon & Yun, 2021; Malla, 2021; Yang et al., 2019). While parents and adolescents are concerned about this issue, effective prevention methods have not been identified or suggested.

Secondly, there is a lack of awareness regarding the applications Muslim students use and how they use them, except for the students themselves. This research emphasizes that parents seem unaware of how their children use smartphones, relying solely on assumptions.

Lastly, the research indicates that Muslim parents ignore their children's psychological aspects, which may be a trigger for PSU. The voices of Muslim students expressing their emotional and psychological needs should be highlighted and noticed by their parents because the family unit is the most influential social entity for preventing PSU among Muslim adolescent students, according to these findings (Kwak et al., 2018; Buctot et al., 2021; Alt & Boniel-Nissim, 2018).

For more effective preventive implications, it is worth recalling the two reasons for PSU found in this study: (1) the psychological needs of adolescents and (2) low regulation within families. The former can be explained by the Interaction of the Person-Affect-Cognition-Execution model (I-PACE Model; Brand et al., 2016; Brand et al., 2019). This model emphasizes that psychopathological factors, such as depression, anxiety, and loneliness, trigger problematic behaviors by diminishing control over these behaviors, leading to negative consequences in daily life.

The latter, the role of parents in families in preventing PSU among adolescent children, should be considered for further studies. Despite the scarcity of studies on the relationship between family dysfunction and smartphone addiction (Kim et al., 2018), recent research has reported a significant relationship between family dysfunction and smartphone addiction among Korean adolescents (Buctot et al., 2021).

This study has brought forth poignant findings. It is common that parents pay limited attention to PSU among their adolescents or show indifference toward understanding the reasons behind it (Kim et al., 2018). Recent research has emphasized the important roles of parents; parental neglect impacts smartphone addiction among Korean adolescents (Kwak et al., 2018), and parent-adolescent communication reduces the level of psychological need enhancing problematic internet use and decreases PSU (Alt & Boniel-Nissim, 2018). Moreover, occasional verbal discipline, with less

effectiveness, may be their sole tool for addressing PSU among adolescents who need a comprehensive understanding within families.

In conclusion, adolescent Muslim students in Southern Thailand use smartphones for learning, communication, and relaxation. The problematic tendencies in smartphone use have been observed by both users and their parents, with overusing and developing dysfunctional habits being the most significant concerns. These tendencies may result from the psychological needs of adolescents and low regulation within families. Consequently, preventive training, activities, or policies are needed to encourage them to seek functional ways of using smartphones by fulfilling their psychological needs and enhancing family functions.

Limitations of this study

It is important to note several limitations of this research. Firstly, this study adopted a phenomenological approach with a small sample of Muslim adolescents and their parents in Southern Thailand, which may limit the generalizability to other social, religious, and cultural contexts. Secondly, participants may have provided socially desirable responses. Additionally, this cross-sectional study may need to include changes or adjustments in smartphone use over time. Therefore, further longitudinal, and experimental studies are needed to understand smartphone usage among adolescents throughout their school lives in various contexts. Future research investigating the underlying mechanisms in the associations between predictors and PSU among adolescents can also contribute to developing programs or policies for preventing PSU.

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