PSYCHOLOGICAL FACTORS THAT INFLUENCE SMARTPHONE ADICTION OF ISLAMIC SCHOOL STUDENTS

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Abstract

Smartphone addiction is a phenomenon that is developing very fast due to easy accessibility and unique internet-based applications. This study aims to determine the effect of psychological factors (self-control, loneliness, and sensation seeking) on smartphone addiction amongst Islamic school (madrasah) students. This study used a quantitative approach with a sample of 327 students of Islamic School (Madrasah) taken with a non-probability sampling technique. Measuring instruments used in this study were Smartphone Addiction Scale (SAS), 24 Attitudinal Items, UCLA Loneliness Scale, and Sensation Seeking Scale V. Data analysis techniques used multiple regression analysis techniques. The results of the study indicated a significant influence of self-control, loneliness, and sensation seeking on smartphone addiction. Based on the results of hypothesis testing, there are four significant variables, namely self-control, intimate others, social others, and boredom susceptibility. Other variables such as affiliation, belonging, thrill, adventure, and experience seeking are not significant to smartphone addiction.

Keywords: *smartphone addiction, self-control, loneliness, sensation seeking.*

Smartphone addiction has attracted the attention of researchers in the past decade, so there are several studies on smartphone addiction. According to Kwon et al. (2013), smartphone addiction is a situation where a person is obsessed with activities on a smartphone and interferes with his daily activities. Smartphone addiction can harm a person, so it attracts some researchers to explore the factors that cause a person to be affected by smartphone addiction. Smartphones are prevalent to be used in various circles, especially among millennials. The millennial generation was born between 1981 and 2000. This generation grew with the development of digital and digital media. Every day, this generation is connected to the internet, television, and smartphones (Ali & Purwandi, 2017; Bolle, 2014;).

The Digital Marketing Emarketer research institute estimates that in 2018 there will be more than 100 million active smartphone users in Indonesia (Rahmayani, 2015). The We Are Social Institute (2017) states that the number of cellphones in the country reaches 371.4 million or 142 percent of the total population of 262 million. Cell phones are spread out for more use than users, meaning that one cellphone user can have more than one cellphone. In contrast, the Minister of Research, Technology, and Higher Education (2017) states that the number of smartphone users in Indonesia now reaches around 25% of the total population of approximately 65 million people.

The spread of smartphones to all members of the community certainly has an increasingly diverse effect. Some can use it well for useful functions, and some use it in negative terms. The many features that exist in smartphones cause opiate effects for users (Alhamid, 2015). Based on literature search results, there are several positive impacts of smartphone usage including bringing ease of interpersonal conversation, social networking, reading e-books, replying e-mail, sending short

messages, management agendas, entertainment such as games, internet access, shopping, and other personal activities (Bian & Leung, 2014; Leung & Liang, 2015).

The observations of researchers, some teens, and even adults use their smartphones to send messages (chat), browse the internet, and even access games when gathering with their colleagues. They are relaxed with their smartphones and ignore the people around them. Few individuals who use smartphones when eating with family and colleagues were busy with their smartphones rather than the gathering. This situation is in line with the study of Bian and Leung (2014) that in the present time, people pay less attention to those around them, they are happy with the activities on their smartphones. Some users even put a smartphone on the table to be an alternative if the interaction with people around them is not interesting enough.

Apart from the many advantages of smartphones that make it easy for individuals, there is one negative impact of the use of smartphones that are addicted to smartphones. Smartphone addiction is fast spreading and becoming a significant problem in the world. This new phenomenon is developing rapidly in a way that is entirely different from the prevalence of other addictive diseases because of the ease of portability, accessibility, and several internet-based applications that are unique to smartphones (Bae, 2017). Excessive dependence on this technology has a severe psychological and behavioral impact on smartphone users (Leung & Liang, 2015). From the results of the study, Hawi and Samaha (2017) found that the effects of excessive smartphone use have a greater chance of having high anxiety. That anxiety has a greater chance of experiencing significant clinical problems in family relationships.

In general, there are internal and external factors that cause a person to become addicted to a smartphone. Internal factors of smartphone addiction include personality factors (extraversion), low self-esteem, stress, self-control, loneliness, shame, preoccupation, tolerance, withdrawal, mood modification, lies, overuse, loss of interest and sensation seeking (Bianchi & Phillips, 2005; Bian & Leung, 2014; Cho, Kim, & Park, 2017; Lee, Kim, & Choi, 2017; Leung, 2007; Wilson, 2003). While external factors are parenting style, and conflict (Kwan & Leung, 2015; Lee, Kim, & Choi, 2017).

Self-control is the most crucial factor in avoiding excessive use of smartphones. Someone who has high self-control, they will be able to direct their behavior (Gufron, 2004). The convenience of the smartphone itself makes the user unaware of other dangers inherent in the smartphone. In addition to addictions, excessive use of smartphones can also be life-threatening. Not infrequently, someone uses a smartphone while driving, walking, crossing, waiting for public transportation, resulting in accidents.

World Health Organization (WHO) data released in 2015 revealed that one of the most common problems in Indonesia today is the use of mobile phones when driving or walking. Also, the Metro Jaya Regional Police Traffic Directorate data show that during 2010 there were 6,000 accident cases, of which 135 were caused by using a cellphone (D-net, 2011). Not only in Indonesia, in the United States itself, but there are also cases where there were 6,000 pedestrian deaths caused by accidents in 2016 (Andi, 2017).

Low self-control results in a person being unable to direct his behavior so that his behavior can result in danger to himself. Also, due to app functions that are interesting and easy to access, smartphone users have been dependent on these devices. They have developed the habit of over-checking their smartphones without conscious self-control (Kim et al., 2017).

Apart from self-control, loneliness is another factor that causes a person to become addicted to a smartphone. Someone lonely tends to talk less; they spend less time doing social activities and more time alone. Because of loneliness, people are reluctant to communicate face-to-face, they tend to interact with people via SMS or other social networking applications on smartphones (Bian & Leung, 2014). A lonely person feels that they can interact with others and express themselves better online than offline (Mehedi, 2009). Therefore, someone who feels lonely tends to be prone to addiction to smartphones because they prefer to interact indirectly (online) rather than directly (offline). Bian and Leung (2014) suggest that lonely and shy people are susceptible to addiction. That happens because interactions via

smartphones reduce social cues (nonverbal cues) such as facial expressions and gestures.

Not only self-control and loneliness, but sensation-seeking factors can also cause smartphone addiction. Surfing on the internet or conducting online activities is widely seen as an adventure in technology. Therefore it can be considered as a form of sensation seeking (Lin & Tsai, 2002). People like to do these activities using smartphones. An essential dimension of sensation seeking is vulnerability to boredom. Most smartphone users use it as an effort to prevent boredom (Roberts, 2015). Leung's research (2007) found that smartphone addiction has a positive correlation with sensation seeking and recreational boredom in a sample of adolescents and young adults.

Based on the description above, this study aims to examine the psychological factors that influence smartphone addiction among madrasa students. Psychological factors in this study are limited to self-control, loneliness, and sensation search.

METHOD

This research is a quantitative study using multiple regression analysis. Participants in this study were 327 students of the 02 Islamic School (Madrasah) in Bekasi, aged 15-18 years, from Grade X to XII. The sampling method used in this study is a nonprobability sampling technique. In this study, there are one dependent variable and eight independent variables. The dependent variable in this study is smartphone addiction. The independent variables are self-control, loneliness, and sensation seeking to be independent variables. The dimension of loneliness consists of intimate other, social other, affiliation, and belonging. The dimension of sensation seeking consists of thrill and adventure seeking, experience-seeking, disinhibition, and boredom susceptibility.

In collecting data, researchers used four measuring instruments. Each measuring instrument is explained briefly as follows.

Smart phone addiction measurement tool

Smartphone Addiction Scale. This measuring instrument was developed by Kwon et.al (2013), which consists of 33 items (Cronbach's alpha = .97). SAC used a scale of 1 (strongly disagree) to 4 (strongly agree).

Self-control measuring device

This study uses 24 attitudinal items developed by Grasmick et al. (1993). This measuring device consists of 24 items (Cronbach's alpha = .812), used to measure impulse, simple tasks, risk-seeking, physical activity, self-centeredness, and temper. This measuring instrument used a scale of 1 (strongly disagree) to 4 (strongly agree). High scores on this scale show low self-control ability (Grasmick et al., 1993).

Loneliness Measures

Loneliness in this study was measured by the UCLA loneliness scale. This measuring instrument was developed by Austin (1983) consist, ing of 21 items (Cronbach's alpha = .90). This measurement tool is used to measure intimate other, social other, affiliation, and belonging. This measuring instrument uses a scale of 1 (strongly disagree) to 4 (strongly agree).

Sensation seeking measure

The sensation-seeking scale V used in this study was adapted from Zuckerman et al. (1978). This measuring device consists of 40 items (Cronbach's alpha = .78). Researchers only used 26 of the 40 questions.2.4.

This study applied a descriptive quantitative research design as illustrated in Figure 1. Mitchell

and Jolley (2010) pointed out the main purpose of the descriptive study is to accurately measure and record variables.
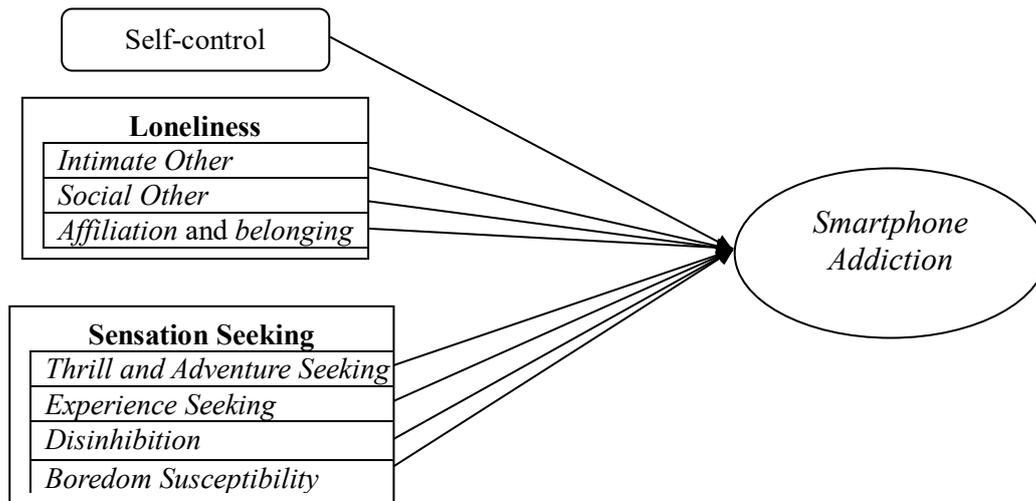

Figure 1 Research Desing and Model

RESULTS

Categorically this research proved the hypothesis that there is a significant influence of self-control, loneliness (intimate other, social other, affiliation, and belonging), and sensation seeking (thrill and adventure seeking, experience-seeking, disinhibition and boredom susceptibility) on smartphone addiction.

Multiple Regression Analysis

At this stage, the researchers tested the hypothesis with multiple regression analysis techniques using SPSS 16 software.

Tabel 1 Results of Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.487	.237	.220	8.35507

Based on Table 1 above, it is clear that R-Square of 0.237 or 23.7% means that the proportion of variance from smartphone addiction explained by self-control, intimate other, social other, affiliation and belonging, thrill, and adventure, experience-seeking, and boredom seeking is of 23.7%. In comparison, the remaining 76.3% is influenced by other variables outside this study. The results of analysis of varians (Anova) is presented in Tabel 2.

Table 2 Results of ANOVA Analysis

ANOVAb						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6917.879	7	988.268	14.157	.000a
	Residual	22268.480	319	69.807		
	Total	29186.359	326			

Based on the F test in the table above, it is understood that the value of p (sig.) In the rightmost column is p = 0,000 with a value of p <0.05. That is, there is a significant influence of all independent variables (self-control, intimate other, social other, affiliation and belonging, thrill and adventure, experience-seeking, and boredom seeking) on the dependent variable (smartphone addiction).

In the next step, the researchers looked at which of the overall variables were significant and not significant to smartphone addiction, as shown in Table 3.

Tabel 3 Coefficient Regression of Each Independent Variable

Coefficientsa					
	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.114	6.860		.162	.871
Self-Control	.392	.057	.366	6.900	.000*
Intimate Others	.157	.061	.146	2.553	.011*
Social Others	.201	.070	.176	2.869	.004*
Affiliation Belonging	.101	.074	.085	1.373	.171
Thrill Adventure	-.067	.054	-.065	-1.239	.216
Experience Seeking	-.029	.071	-.023	-.404	.687
Boredom Seeking	.223	.078	.151	2.856	.005*

a. Dependent Variable: Addiction

* (Sig)

The explanation of the regression coefficient values obtained by each independent variable is as follows.

1. The self-control variable obtained a regression coefficient of 0.392, with a significant level of 0.000 (sig <0.05). This finding shows that the Self Control variable has a significant effect on smartphone addiction. Positive direction indicates that the higher the self-control, the higher the smartphone addiction.

2. The Intimate Other variable obtained a regression coefficient of 0.157 with a significant level of 0.011 (sig <0.05). This finding shows that the Intimate Other variable has a significant effect on smartphone addiction. The positive direction indicates that the higher the intimate other, the higher the smartphone addiction.

3. The Other Social variable obtained a regression coefficient of 0.201 with a significance level of 0.004 (sig <0.05). This finding shows that the Social Other variable has a significant influence on smartphone addiction. Positive direction indicates that the higher the social other, the higher the smartphone addiction.

4. The Affiliation and belonging variable obtained a regression coefficient of 0.101 with a significant level of 0.171 (sig> 0.05). This finding shows that the Affiliation and Belonging variable does not have a considerable effect on smartphone addiction.

5. The Thrill Adventure variable obtained a regression coefficient of -0.067 with a significant level of 0.216 (sig> 0.05). This finding shows that the Thrill Adventure variable does not have a considerable effect on smartphone addiction.

6. The Sensation Seeking variable obtained a regression coefficient of -0.029 with a significant level of 0.687 (sig> 0.05). This finding shows that the Sensation Seeking variable does not have a

considerable effect on smartphone addiction.

7. The Boredom Susceptibility variable obtained a regression coefficient of 0.223 with a significance level of 0.005 (sig <0.05). This finding shows that the Boredom Seeking variable has a significant effect on smartphone addiction. The positive direction indicates that the higher the boredom seeking, the higher the smartphone addiction.

Based on the results of the analysis of research data, we concluded that there is a significant influence of self-control, loneliness, and sensation seeking on smartphone addiction, with R Square's value of 0.237 or 23.7%. This finding means that the proportion of variants of smartphone addiction explained by self-control, loneliness in aspects (intimate other, social other, and affiliation and belonging), and sensation seeking in aspects (thrill and adventure seeking, experience-seeking, and boredom susceptibility) is 23.7 %.

Based on the results of the hypothesis test that tested the significance of each regression coefficient on the dependent variable, we found four regression coefficients that significantly affect smartphone addiction, namely, intimate other, social other, self-control, and boredom seeking.

DISCUSSION

The results of the categorization of smartphone addiction levels indicate that MAN 02 Bekasi students have high smartphone addiction, with a percentage of 52.3%. This finding means that 52.3% of students use their smartphones excessively and disrupt their daily activities. This finding is in line with the opinion of Bae (2017), which states that the period of adolescence is in a period of brain development that is vulnerable to addiction. Youth is at a high level of cultural addiction risk. Correctly, adolescents were identified as the leading risk group for smartphone addiction.

From the results of the study, note that the categorization of self-control in MAN 02 Bekasi students is low. These results are by the survey of Tibbetts (1999), who found that the classification of self-control in adolescents was at a low level. From the results of the study, it can be seen that the effect of self-control on smartphone addiction has a positive direction. This finding is in line with Cho, Kim, and Park's (2017) research, where the results of the study show the direction of positive self-control coefficients because high scores on the self-control scale indicate low self-control abilities.

The results showed that self-control has a significant influence on smartphone addiction, according to research that reveals that the emergence and increase of smartphone addiction come from the lack of social control or self-control from users (Bianchi and Phillips, 2005; Cho, Kim, and Park, 2017).

From the results of the study, overall, the loneliness variable is significant to smartphone addiction according to research (Bhardwaj and Ashok, 2015; Boumosleh and Jaalouk, 2017) who found that loneliness and smartphone addiction were positively correlated. These results also reinforce the previous study of Bian and Leung (2014), who found that the higher the shame and loneliness, the higher the likelihood that someone would be addicted to a smartphone.

The loneliness variable has three dimensions, namely intimate other, social other, and affiliation and belonging. The results of the categorization of intimate others are in a low category; it shows that each student feels distanced from other students or feels that he does not have a meaningful relationship with others (Austin, 1983). Intimate other has a significant effect on positive smartphone addiction. This finding means that the higher the intimate other, the higher the smartphone addiction. A person's feelings about the distance from others and feelings of not having a meaningful relationship are the results of an individual's subjective evaluation. These feelings are a form of negative emotions. According to Martin and Schumacher's (2003) research, someone who has negative perceptions about social skills and poor communication skills tends to overuse the internet. They use the internet to avoid direct interaction. According to Kim (2013), internet addiction has many aspects similar to smartphone

addiction. The results of the study are in line with the previous study done by Bian and Leung's (2014). They found that someone is reluctant to communicate face-to-face, they tend to interact with people via SMS or other social networking applications on smartphones, and this is a factor for someone to be affected by smartphone addiction.

The results of other social categorizations are in a low category; it shows that students feel they do not have social networks (Austin, 1983). Other social has a significant effect on positive smartphone addiction. This finding means that the higher the social other, the higher the smartphone addiction. These results are also in line with research which states that someone who has negative feelings about social skills tends to overuse the internet, and excessive use of social networking applications is a factor that a person is likely to be affected by smartphone addiction (Martin and Schumacher, 2003; Kim, 2013; and Bian and Leung, 2014).

While the results of the categorization of the affiliation and belonging variables are in the high category, meaning they feel that they are part of a group. Affiliation and belonging do not have a significant effect on smartphone addiction. High membership and possession do not affect addiction because, according to Hsu, Wen, and Wu (2009), when a person feels involved in his group, he experiences a sense of belonging and feels accepted by the group. The results of Mellor, Stokes, Firth, Hayashi, and Cummins (2008) research shows that affiliation and belonging have a positive influence on loneliness, meaning the lower the level of affiliation and belonging needs, the lower the level

CONCLUSION

Smart phone addiction among teenagers, especially madrasa students, is influenced by psychology that is internal, namely self-control, loneliness, and the search for sensation. Students who have high self-control tend to have low telephone addiction. Likewise students with low levels of loneliness and sensation seeking tend to have low smartphone addiction levels.

The results of this study have implications in the learning process in education and family units. Teachers, including school / madrasah counselors need to improve student self-control through classroom learning activities, counseling services, and extra-curricular activities. Through this activity will not experience loneliness and will not look for sensations via smart phone. Meanwhile, parents of students need to apply positive parenting and provide supervision to their children while at home.

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