

Teenager's Thought is Related to Self-Control in Safe Smartphone Use During the Covid-19 Pandemic

Rizki Fitryasari^{1*}, Rr. Dian Tristiana¹, Ah. Yusuf¹

Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia Kampus C Unair Mulyorejo Street, Surabaya, Indonesia 60115.

***Corresponding Author: Rizki Fitryasari**

Abstract

Introduction: The use of smartphones in the Covid-19 pandemic era is an inevitable phenomenon, including for teenager who participated in online learning. The inability to control themselves independently in using smartphone-based devices is a risk factor for gadget addiction. This study aimed to analyze the relationship between teenagers' thought and self-control in safe smartphone use in the Covid-19 pandemic era. **Methods:** This study was descriptive correlation design based on a cross-sectional approach. The population was teenagers aged 11-18 years in Surabaya, Indonesia who had participated in online learning during the Covid-19 pandemic. The purposive sampling was conducted and gained 185 respondents. The study variables were teenagers' thought and self-control in using smartphones. The instrument used was a questionnaire and the data were analyzed using the Spearman Rank test. **Results:** The statistical test results showed that a good thought of teenagers was related to high self-control in using a smartphone ($p = 0.000$, $r = 0.371$). **Conclusion:** The teenager's thought in smartphone usage was formed based on benefits, barrier, beliefs and the consequences of online learning activities. The teenagers' awareness will lead to a good self-control for limiting the smartphones usage independently. Further research should be focused on the development of a safe smartphone usage guidance that can assist teens to be able to use the smartphone safely.

Keywords: *Teenagers, Smartphones, Thought, Self-control, Covid-19 pandemic.*

Introduction

The use of Smartphone's in the era of the Covid-19 pandemic is a condition that cannot be avoided and tends to be a necessity. Teenagers are one of the smartphone users who are active to fulfill social needs and participating in online school learning activities [1]. Teenagers' inability to use smartphones wisely can lead to smartphone addiction [2]. Smartphone addiction among teenagers in the Surabaya city occurs at a mild to severe level in the form of excessive use (more than 10 hours per day), tend to withdraw socially, and refuse to do activities because of spending time using smartphones.

Smartphone addiction in teenagers is determined by self-control ability, that smartphones are used to achieve developmental tasks and not just to fulfill pleasure needs [3]. Self-control is about being able to read the self-situation and the environment as well as able to control and

regulate behavior so that the right decisions could be reached (Bandura, 2002; Gufron & Riswanita, 2010).

Teenager is individuals aged between 12-25 years who undergoing adaptation process to be able to control themselves towards legal adulthood [6], [7]. Self-control helps individuals overcome various harmful matter from outside[5]. Smartphone addiction can occur because of inability to control one-self [8]. The teenagers' ability to control smartphones use in this study used the self-regulation theory point of view. Self-regulation is a process involving self-planned thoughts, feelings and actions which occurs continuously conform with the efforts to achieve personal goals [9].

Self-regulation improves one's self control by mental changing that it will motivate and control the smartphone addiction behavior. Self-regulation helps control the impulses

that cause poor self-control [10]. Self-regulation is individual self-control process of in which internal factors, namely teenagers' self-thoughts, become the basis for behavior. Self-thought refers to the process underlying an attempt to act.

Self-thought involves task analysis, which is the process of setting goals and planning an action to be conducted [9]. The teenager thoughts are expected on the right goals in using smartphones during the Covid-19 pandemic. It will help teenagers to establish good self-control and avoid smartphone addiction. This study aimed to determine the relationship between teenager thoughts on self-control in safe smartphone use during the Covid-19 pandemic era.

Methods

This study used a descriptive correlation design with a cross-sectional approach. The study population was teenagers using smartphones in the Surabaya city during the COVID-19 pandemic era. A total sample of 185 teenagers was obtained using purposive sampling. The inclusion criteria were teenagers aged 11-18 years, own and actively using smartphones, actively participating in online learning from schools.

The independent variable of this study was the teenagers' thought. The dependent variable was teenager self-control in safe smartphone use during Covid-19 pandemic era. The instrument was a questionnaire developed by researchers based on prior questionnaires and theories.

The teenager self-thoughts instrument consists of four indicators, namely benefits, barriers, beliefs and effects of smartphone's use on teenagers. This instrument was developed based on the concept of Health Promotion (Pender, 2000) and smartphone uses questionnaire [10]. The questionnaire was filled out on 3-point Likert scale of 1

(never)-3 (always). The teenager self-control instrument consists of three indicators, namely cognitive control, behavioral control, and decision making which was modified from the Self Control Model (Li, 2013) and smartphone uses questionnaire [10]. The questionnaire was filled out on 3-point Likert scale of 1 (never)-3 (always). All the questionnaires have tested for its reliability and validity into pilot sample on 30 respondents. The test results showed that the component of the questionnaires was valid and reliable ($p > 0.73$). The data collection procedure was carried out online.

The online questionnaires were designed using google form and distributed through social media aimed at respondents according to the inclusion criteria. Written explanations regarding the objectives, benefits and procedures of the study were clearly informed. All respondents who agreed to take part in the study must obtain parental consent by signing online informed consent and the agreement was being confirmed by telephone.

Ethical approval for this study was obtained from the Ethics Committee of the Faculty of Nursing, Universitas Airlangga with approval number: 2018-KEPK. The data obtained were then analyzed using univariate and bivariate statistical test. Univariate analysis was performed on the respondents' demographic data of which included gender, age, class, internet-based devices ownership, types of internet access used, and activities on social media.

Bivariate analysis was carried out to test the relationship between teenager self-thought variables and self-control in safe smartphone use during the Covid-19 pandemic era. The analysis used was the Spearman Rank test with a significance level of $\alpha = 0.05$.

Results

Respondents' Characteristics

Tabel 1: Demografic's characteristic of respondent

| Characteristic | Frequency | % |
|---------------------|-----------|------|
| Gender | | |
| Male | 125 | 67.6 |
| Female | 60 | 32.4 |
| Total | 185 | 100 |
| Age (years) | | |
| 13 | 5 | 2.7 |
| 14 | 12 | 6.5 |

| | | |
|----------------------|-----|------|
| 15 | 17 | 9.2 |
| 16 | 101 | 54.6 |
| 17 | 34 | 18.4 |
| 18 | 16 | 8.5 |
| Total | 185 | 100 |
| School Grades | | |
| 7 th | 2 | 1.1 |
| 8 th | 4 | 2.2 |
| 9 th | 6 | 8.6 |
| 10 th | 21 | 11.4 |
| 11 th | 121 | 65.4 |
| 12 th | 21 | 11.4 |
| Total | 185 | 100 |

Table 1 explain, the majority of respondents attending public schools in the East and Central Surabaya region and are in grade 11th (second year of senior high school). Most of the respondents live in the eastern and western regions of Surabaya

Smartphone Usage Characteristic

Tabel 2: Smartphone usage characteristic

| Table 2: Smartphone usage characteristic | | |
|--|---------------|-------|
| Characteristic | Frequency | % |
| The amount of mobile device | | |
| number | | |
| 1 | 134 | 72.4 |
| 2 | 47 | 25.4 |
| >2 | 4 | 2.2 |
| Kind of mobile device | | |
| Handphone | 184 | 99 |
| Laptop | 49 | 26.5 |
| Tablet | 9 | 4.8 |
| Internet data usage | | |
| Daily | 10 | 5.4 |
| Weekley | 14 | 7.5 |
| Monthly | 98 | 52.97 |
| Home Wifi | 92 | 49.7 |
| Smartphone's access | | |
| Time using smartphone | | |
| Mean | 8.04 hour/day | |
| Standart of deviation (SD) | 5.05 | |
| Frequent time | | |
| Morning | 37 | 2.0 |
| Noon | 86 | 46.5 |
| Afternoon | 65 | 35.1 |
| Evening | 120 | 64.86 |
| Night | 30 | 16.2 |
| Reason to use smartphone | | |
| School assignment | 159 | 85.9 |
| Browsing | 155 | 83.7 |
| Communication | 163 | 88.1 |
| Social Media | 159 | 85.9 |
| Leisure time | 141 | 76.2 |

| | | |
|--------------------------|-----|------|
| Playing game | 98 | 52.9 |
| Bussiness | 36 | 19.4 |
| Self actualisation | 19 | 10.2 |
| Life Style | 28 | 15.1 |
| Watching korean movie | 1 | 0.5 |
| Social Media | | |
| Application | | |
| Facebook | 21 | 11.3 |
| Whatsapp | 167 | 90.3 |
| Line | 68 | 36.7 |
| Instagram | 160 | 86.4 |
| Snap-chat | 16 | 8.6 |
| You tube | 133 | 71.8 |
| Tik-tok | 22 | 11.8 |
| Frequent Activity | | |
| Status Update | 53 | 28.6 |
| Photo Upload | 28 | 15.1 |
| Comment/like | 112 | 60.5 |
| Profile update | 31 | 16.7 |
| Browsing | 162 | 87.5 |
| Chatting | 9 | 4.8 |

Table 2 shows that most of respondents use one mobile device called hand-phone with monthly internet data usage or home Wi-fi. They spent 8.04 hours/day for smartphone use, mostly in the evening for communication, doing school assignment, accessing social media, browsing and spent the time. Most of them are user friendly with Instagram, whatsapp, and YouTube for browsing, comments, or like in social media platform

Distribution of Research Variables

Table 3: Table of variables distribution of teenager thought and self-control in safe Smartphone use

| Variable | Poor | | | | Good | |
|---------------------------|------|------|------|------|------|------|
| | F | % | F | % | F | % |
| Teenager's thought | | | | | | |
| Benefit | 3 | 1.6 | - | - | 182 | 98.4 |
| Barrier | 9 | 4.9 | - | - | 176 | 95.1 |
| Belief | 0 | 0 | - | - | 185 | 100 |
| Consequence | 4 | 2.2 | - | - | 181 | 97.8 |
| Self-control | Low | | Fair | | High | |
| Cognitive | 30 | 16.2 | 81 | 43.8 | 74 | 40 |
| Behavior | 5 | 2.7 | 53 | 28.6 | 127 | 68.6 |
| Decision | 6 | 3.2 | 57 | 30.8 | 122 | 65.9 |

The majority of teenagers have a good thoughts regarding to the benefits and beliefs of safe smartphone use. Likewise, almost all of the thoughts about the barrier and consequence of using a smartphone are good. Teenager self-control abilities vary from low to high levels, and are dominated by a high level of cognitive control, behavior and decision making (Table 3)

Statistical Test Results

Table 4: The results of the Spearman Rho test analysis of the variables of teenager thinking on teenager self-control in safe smartphone use

| Teenager's thought | Self control | | | Total |
|---------------------|--------------|------------|------------|-------------|
| | Low | Fair | High | |
| Bad | 4 (2.1%) | 51 (27.6%) | 17 (9.1%) | 72 (38.8%) |
| Good | 3 (1.6%) | 48 (26%) | 62 (33.6%) | 113 (61.2%) |
| Total | 7 (3.7%) | 99 (53.6%) | 79 (42.7) | 185(100%) |
| p=0.000 , r = 0.371 | | | | |

The results of statistical tests (table 4) showed that the better the teenagers' thought, the higher the self-control in safe smartphone usage during the Covid-19 pandemic, with p=0.000. The strength of the relationship is low as indicated by the correlation coefficient of r = 0.371

Discussion

The teenagers' thoughts in Smartphones usage During the Covid-19 pandemic era

The majority of teenagers have good thoughts in all aspects, namely related to the purpose and beliefs of use and in addressing the barrier and consequences of safe smartphones usage in the era of the Covid-2019 pandemic. Youth thought is the initial stage in self-regulation [9]. The teenagers' thought of smartphones usage based on awareness related to goals and belief that smartphones will help teenagers meet their desired needs. Those thoughts become self-motivation in achieving the desired results without coercion [12].

The thought stage in teenagers begins with determining the goals to be achieved. This study results indicated that teenagers use smartphones to communicate with their friends and family, do online schoolwork, and do activities on social media. During the Covid-19 pandemic era, all teenagers in the Surabaya city taking online learning class do not meet school friends directly, and all activities are carried out from home. This situation increases the smartphone use frequency.

The data showed that the teenager spent an average of 8 hours per day on their smartphone, mainly during the day and evening. However, the teenagers in this study prioritize the obligation to do school work and communicating with friends, including discussing school work in smartphone usage. Teenagers believe that being able to communicate with friends and to do good schoolwork even though online during a pandemic will foster a sense of pleasure and pride.

The next stage of teenagers' thought was the goal setting [9]. Teenagers also encounter various barriers such as limited internet quota or bad internet networks connection and realize the negative effects, namely smartphone addiction when using excessively and only for pleasure purposes. The internet network connection limitations are one of the reason for smartphone users considerations [13].

Most of teenagers in the Surabaya use of smartphones for pleasure purposes such as spending free time and playing games but after they completing school-work.

Youth motivation is related to smartphone usage patterns [14]. The smartphones usage based on the goal of achieving teenagers' development tasks for example doing school assignments, will increase the use of smartphones but within appropriate and safe boundaries. The safety uses of smartphones is to increase knowledge, and make it easier to access various information for self-development [15].

Teenager Self-control in Safe Smart phones usage during the Covid-19 pandemic era

Teenager self-control is described through three indicators, namely cognitive control, behavior and decision making. Self-control refers to an individual decision after initiates cognitive considerations to do planned action to achieve the desired goal [5]. The results showed that teenagers in the Surabaya city were able to control behavior and produce good decisions in using smartphones.

Teenagers cognitively control the understanding that using a smartphone too much time will interfere the other activities. Teens prioritized the smartphones usage for the benefit of school assignments and communicating as a form of behavior control. Finally, teenagers committed and decided to limit the smartphones use independently. The teenagers successful of decision making control can be distinguished by priority based on the selected critical actions [9].

More than half of the teenagers in this study were aged 16-18 years and attended middle school, which is affected by surrounding situations easily. Teenagers are a transitional phase from childhood to adulthood which are influenced by environment easily [16]. The teenagers' ability to comply the positive environmental influences and decide to limit the smartphones use independently constitutes a good self-control. Self-regulation encourages teenagers to identify problems and determine the appropriate actions to solve problems [4].

The Relationship between Teenagers' Thoughts and Self-control in Smartphone's usage during the Covid-19 pandemic era

The study results showed that teenagers' thoughts were related to self-control to safe smartphones usage during the Covid-2019 pandemic era.

Self-control is an individual's ability to regulate feelings and thoughts to emerge the behavior shaping [17], [18]. Teenagers in Surabaya City showed good self-control in using smartphones by having a commitment to limit smartphone use independently. The short-term desires limitation independently is an essential element for teenagers to exert self-control successfully [19]. Teens accessed their social media for fun during their spare time after completing school work.

This situation is demanding because of online learning must be taken by all teenagers during the Covid-19 pandemic. Commitment is teenager self-control form which is based on the main benefits awareness to be achieved in using smartphone. All the teenagers attending junior and senior high schools in Surabaya took part in online learning during the pandemic period. All learning activities utilize smartphones to do assignments, communicate with teachers and mates.

The smartphones' use had shifted from just communicating or browsing, to being more focused on learning objectives. In addition, teenagers are able to accomplish to limit the smartphone use because of their awareness that there are disadvantages impacts when using a smartphone excessively other than doing school work. The results showed that teenagers realized that smartphone usage cause delayed bedtime and disrupted daily activities.

This situation is in line prior study [20] which stated that uncontrolled smartphone use leading to many negative consequences on teenagers such as bullying, sexual violence and solicitation. Teenager self-awareness is essential for self-thought to foster the commitment as a tangible manifestation for teenager self-control abilities in using smartphones safely.

Conclusion

The better teenagers' thought was related to high self-control in using a smartphone. The thought formed for the smartphones usage must be based on benefits, barrier, beliefs and the consequences of online learning activities. The teenagers' awareness will lead to a good self-control for limiting the smartphones usage independently.

Acknowledgments

We would like to thank The Directorate of Research and Community Service, Indonesian Ministry of Research and Technology/ National Innovation Research Agency for funding this project (Grant Number: 914/UN3.14/PT/2020)

References

1. A Lenhart (2015) "Mobile Access Shifts Social Media Use and Other Online Activities," *Pew Research Center: Internet, Science & Tech.*, [Online]. Available: <http://www.pewinternet.org/2015/04/09/mobile-accessshifts-social-media-use-and-other-online-activities/>. [Accessed: 24-Oct-2020].
2. E Cocorada, C I Maican, A M Cazan, M Maican (2018) "Assessing the smartphone addiction risk and its associations with personality traits among adolescents," *Child. Youth Serv. Rev.*, 93: 345-354.
3. M Fauzi, A Yusuf, Mundakir (2019) "Predictive Risk Factors of Smartphone Addiction in Adolescents: A Systematic Review," *J. Ners*, 14: 3.
4. A Bandura (2002) *Self efficacy: The Exercise of Control*. New York: W. H. Freeman & Company.
5. M N Gufron, R Riswanita (2010) *Psychology Theorys*. Yogyakarta, Indonesia: Ar Ruzz Media.
6. Prawirohardjo, Sarwono (2005) *Midwivery Science*. Jakarta: Bina Pustaka.
7. Indonesian Ministry of Health (2015) *The situation of Adolescent Health*. Jakarta: Infodatin Pusat Data dan Informasi Kementerian Kesehatan RI.
8. J Sun, Q Liu, S Yu(2018) "Child neglect, psychological abuse and smartphone addiction among Chinese adolescents: The roles of emotional intelligence and coping style," *Comput. Human Behav.*, 90 no. September 2017 74-83.
9. B Zimmerman (2000) *Attaining Self-Regulation. Handbook of Self-Regulation*. New York.
10. A J A M Van Deursen, C L Bolle, S M Hegner, P A M Kommers (2015) "Modeling habitual and addictive smartphone behavior: The role of smartphone usage types, emotional intelligence, social stress, self-regulation, age, and gender," *Comput. Human Behav.*, 45: 411-420.
11. X Li, D Li, J Newman (2013) "Parental

- Behavioral and Psychological Control and Problematic Internet Use Among Chinese Adolescents: The Mediating Role of Self-Control," *Cyberpsychology, Behav. Soc. Netw.*, 16 (6): 442-447.
12. P Daniela (2015) "The Relationship Between Self-Regulation , Motivation And Performance At Secondary School Students," *Procedia - Soc. Behav. Sci.*, 191: 2549-2553.
 13. J S Chun (2017) "Conceptualizing effective interventions for smartphone addiction among Korean female adolescents," *Child. Youth Serv. Rev.*, 84 November 35-39.
 14. C Lee, S J Lee (2017) "Prevalence and predictors of smartphone addiction proneness among Korean adolescents," *Child. Youth Serv. Rev.*, 77 April 10-17.
 15. M Kaur, K Singh, N A Samah (2018) "Impact of Smartphone: A Review on Positive and Negative Effects on Students," 14 (11): 83-89.
 16. S Haug, R P Castro, M Kwon, A Filler, T Kowatsch, M P Schaub (2015) "Smartphone use and smartphone addiction among young people in Switzerland," *J. Behav. Addict.*, 4 (4): 299-307.
 17. A Peker (2017) "An examination of the relationship between self-control andCyber victimization in adolescents," *Eurasian J. Educ. Res.*, 67: 1-15.
 18. Moilanen, L Kristin, Rasmussen, E Katie, Padilla-walker, M Laura (2014) "Bidirectional associations between self-regulation and parenting styles in early adolescence," *J. Res. Adolesc.*, XXX(X): 1-17.
 19. V Allom, G Panetta, B Mullan, M S Hagger (2016) "Self-report and behavioural approaches to the measurement of self-control: Are we assessing the same construct?," *Pers. Individ. Dif.*, 90: 137-142.
 20. K Mitchell, L Jones, D Finkelhor, J Wolak (2014) "Trends in Unwanted Online Experiences and Sexting: Final Report," *Crimes Against Children Research Center*. [Online]. Available: <http://scholars.unh.edu/ccrc/49>.