

The Relationship between Smartphone Addiction and Psychological Well-Being in Early Adulthood

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ABSTRACT

This study was conducted to determine the relationship between smartphone addiction and psychological well-being in early adulthood. The theory used in this research is the smartphone addiction theory by Kwon et al. (2013) and psychological well-being by Ryff (1995). This research was conducted quantitatively and there were 91 respondents (66 female and 25 male) aged 18-25 years who were obtained using snowball sampling techniques. In this study, the Smartphone Addiction Scale Short-Version, Psychological Well-Being Scale, and Individual information forms were utilized to retrieve data. The data were processed using descriptive analysis techniques, One-Sample Kolmogorov-Smirnov Test, Pearson Correlations, and One-Way Analysis of Variance (ANOVA). The results of data processing shows that there is no significant relationship between smartphone addiction and psychological well-being in early adulthood.

Keywords: *Smartphone, Addiction, Psychological Well-Being, Early Adulthood*

1. INTRODUCTION

In this digital era, it is not uncommon for people to have smartphones that are used as devices to access the internet. Smartphones are increasingly needed in everyday life and offer a wide variety of information, communication, education and entertainment [1]. After China, India, and America; Indonesia became the country with the fourth largest active smartphone users In 2018 [2]. Most smartphones users in Indonesia are in the age range of 20-29 years [3]. This shows that most of the smartphone user population in Indonesia is in the early adulthood stage.

Based on the number of smartphone users, it can be said that smartphones are important devices in everyday life. The interest of smartphones is not only to connect with other people but also to have other features such as reading e-books, answering e-mails, sending messages, or engaging with online games [4]. Smartphones have a positive impact but can also have a negative impact. The negative effects of smartphone use are varied and one of the impacts is addiction. Addiction according to the Cambridge Dictionary is the inability to stop doing or using something. Addiction not only refers to the abuse of drugs but also refers to gambling, internet, games, and smartphones [5]. Smartphone addiction is a form of technology addiction [6]. Technology addiction is operationally defined as

non-chemical addiction or behavioural addiction that includes human-machine interactions [7]. Through the definition above, smartphone addiction is an important variable to study.

Adequate use of smartphones can contribute to improving emotional well-being and psychological well-being [8]. However, constant and excessive use of smartphones has been linked to a variety of problems such as sleep disturbances, stress, anxiety, withdrawal, and decreased levels of well-being. [9]. Several studies have likewise shown that there is a positive connection between smartphone addiction and stress levels [10] [11] [12]. There is a positive relationship between loneliness and smartphone addiction [4]. There is also a positive connection between smartphone addiction with levels of depression, levels of anxiety, and sleep disorders [8]. Research conducted by Darcin et al. [13] also showed that there is a relationship between smartphone addiction and loneliness and social anxiety. Research conducted by Aker et al. [14] shows that depression, anxiety, insomnia, and family support have a significant relationship to smartphone addiction. The results of research conducted by Duke and Montag [15] also shows that smartphone addiction has a negative impact on productivity levels at work and in everyday life. Lee [16] found that those who are at risk of having smartphone addiction show bad levels of behavioural and emotional problems, low self-esteem, and have

poorer communication quality. Through the visible impact of the studies above regarding smartphone addiction, it can be seen that smartphone addiction affects a person's health both physically and psychologically.

The impact of smartphone addiction which results in stress, anxiety, loneliness, sleep disturbances, depression, sleep disorders and disturbances in productivity which affect the decrease in the level of well-being, it can be concluded that the decrease in the level of welfare that is affected is the level of psychological well-being. According to Ryff [17] psychological well-being is a good introduction to individual psychological functions. Complemented by Diener [18] who states that psychological well-being is believed to represent the optimal function of humans.

Psychological well-being has been linked to smartphone addiction in a previous study conducted by Kumcagiz and Gunduz [19], the outcome of this study shows that there is a significant relationship between psychological well-being and smartphone addiction. Although there have been several studies examining the relationship between smartphone addiction and factors that affect psychological well-being such as stress, anxiety, and loneliness, not many studies have considered the direct relationship between smartphone addiction and psychological well-being. From this description, the authors would like to examine the relationship between smartphone addiction and psychological well-being in early adulthood.

2. BACKGROUND

This study uses a quantitative, non-experimental approach. The point of this study is to determine the relationship between smartphone addiction and psychological well-being. Participants were selected through snowball sampling. The criteria for the subjects in this study were young adult aged 18-25 years who owns and uses smartphone.

In this research, the Smartphone Addiction Scale Short Version, Psychological Well-Being Scale, and Individual Information Form were utilized to collect data.

Smartphone addiction is measured using the Smartphone Addiction Scale Short Version developed by Kwon et.al [20] that has been adapted by Mumtaz [21]. It consists of 10 items in the form of statements, where participants are asked to rate how much they agree or disagree with the statements on a 4-point likert scale (1-strongly disagree to 4-strongly agree). In this study, 0.855 was calculated for the Cronbach's alpha coefficient of the Smartphone Addiction Scale Short Version.

Meanwhile the Psychological Well-Being Scale (PWBS) by Ryff [21] which has been adapted by Tarumanagara University Research Team was used to measure participants' psychological well-being. It consists 31 items in the form of statements, where participants are asked to rate how much they agree or disagree with the statements on a 5-point likert scale (1-strongly disagree to 5- strongly agree). In this study, 0.796 was calculated for the Cronbach's alpha coefficient of the Psychological Well-Being Scale

Collection of data was conducted from November 2020 to December 2020. The final number of respondents were 155 people with 107 of them are female (69%) and 48 of them are male (31%).

Data analysis was conducted using SPSS Version 20 to discover the relationship between smartphone addiction and psychological well-being.

Descriptive statistical analysis was conducted to describe respondents' smartphone addiction and psychological well-being by reviewing the mean values.

Table 1. Descriptive Statistical Analysis Result

	N	Min	Max	\bar{X}	σ
Smartphone Addiction	91	1.40	4.00	2.55	0.62
Psychological well-being	91	2.00	4.61	3.50	0.45

This study uses a likert scale with a minimum score of 1 and a maximum score of 4 for the smartphone addiction variable and likert scale with a minimum score of 1 and a maximum score of 5 for the psychological well-being variable. The hypothetical mean score for smartphone addiction is 2.5 and the hypothetical mean score for psychological well-being is 3. The empirical mean score for smartphone addiction is 2.39 and the empirical mean score for psychological well-being is 3.51. With the empirical mean score for smartphone addiction being smaller than the hypothetical mean score and the empirical mean score for psychological well-being being greater than the hypothetical mean score indicating that the respondents' smartphone addiction is relatively low or below average and respondents' psychological well-being is relatively high or above average.

Normality test was carried out on 2 variables using the One-Sample Kolmogorov Smirnov Test with both variables has $p > 0.05$. It can be concluded that the data on the two variables are normally distributed.

Pearson Correlation test was conducted to see the strength of the relationship between variables. Pearson Correlation was used because the data is normally distributed.

Table 2. Pearson Correlation Result

		Smartphone Addiction
Psychological Well-Being	Pearson	-0.051
	Correlation (r)	
	Sig. (2-tailed)	0.63
	N	91

From Table 2, there are no significant correlation between the two variables.

Table 3 shows the outcome of comparison of the smartphone addiction and psychological well-being mean scores based on respondents' age.

Table 3. One-Way ANOVA result of the smartphone addiction and psychological well-being by age

		SS	df	MS	t	p
SA	BG	4.331	7	.619	1.726	.114
	WG	29.755	83	.358		
	Tot	34.086	90			
PWB	BG	1.271	7	.182	.890	.518
	WG	16.926	83	.204		
	Tot	18.197	90			

Table 3 shows that there is a contrast in smartphone addiction mean score based by age. However, there is no contrast in psychological well-being mean score based by age.

Table 4 shows the outcome of comparison of the smartphone addiction and psychological well-being mean scores based on the respondents' gender.

Table 4. One-Way ANOVA result of the smartphone addiction and psychological well-being by gender

		SS	df	MS	T	p
SA	BG	.061	1	.061	.160	.690
	WG	34.025	89	.382		
	Tot	34.086	90			
PWB	BG	.080	1	.080	.393	.532
	WG	18.117	89	.204		
	Tot	18.197	90			

Table 4 shows there is no contrast in smartphone addiction mean score and psychological well-being mean score based by gender

Table 5 shows the outcome of the comparison of smartphone addiction and psychological mean scores based on working status.

Table 5. One-Way ANOVA result of the smartphone addiction and psychological well-being by working status

		SS	df	MS	t	p
SA	BG	.890	3	.297	.778	.509
	WG	33.196	87	.382		
	Tot	34.086	90			
PWB	BG	.189	3	.063	.304	.822
	WG	18.008	87	.207		
	Tot	18.197	90			

Table 5 shows there is no contrast in smartphone addiction mean score and psychological well-being mean score based by working status.

Table 6 shows the outcome of the comparison of smartphone addiction and psychological well-being mean scores based on respondents' domicile of residence.

Table 6. One-Way ANOVA result of the smartphone addiction and psychological well-being by domicile of residence

		SS	df	MS	t	p
SA	BG	4.359	4	1.090	3.153	.018
	WG	29.727	86	.346		
	Tot	34.086	90			
PWB	BG	.1183	4	.296	1.495	.211
	WG	17.014	86	.198		
	Tot	18.197	90			

Table 6 shows there is a contrast in smartphone addiction mean score based by domicile of residence. However, there is no contrast in psychological mean score based by domicile of residence.

This study's aim was to try to determine the relationship between smartphone addiction and psychological well-being in early adulthood. At this time, the use of smartphones has become very familiar with everyday life. Lots of people can't live without smartphones these days. Behaviour related to smartphones that can possibly be a social problem [5]. This is the definition of smartphone addiction, therefore it is important for psychologists and social scientists to use smartphone addiction as research material.

The outcomes of this study shows that there is no significant relationship between smartphone addiction and psychological well-being. Previous research led by Kumcagiz and Gunduz [19] found that there was a significant negative relationship between smartphone addiction and psychological well-being. The

aftereffects of this study might have occurred due to the limited number of respondents in this study.

In this study, there is a significant difference between smartphone addiction based by age, but there is no significant difference between psychological well-being based by age. Younger people tends to have a higher rate of smartphone addiction compared to older age [20]. Significant differences were found for psychological well-being in the age group of 14-17 years with 19-25 years [19]. In this study, the age that is used to be studied was the age group of 19-25 years, so the age difference with psychological well-being was not significant.

In this study there were no huge contrast in gender with smartphone addiction and psychological well-being. Kwon et. al. [20] found that there were significant differences in the gender of women than men with smartphone addiction. For psychological well-being, women score better than men in the dimensions of positive relations and personal growth [17]. However, in previous research by Kumcagiz and Gunduz [19] psychological well-being did not have a significant difference in gender. The results of this study are supported by the results of previous studies.

In this study it was also found that there were no contrast in smartphone addiction and psychological well-being. There has been no previous research which states that there is either a significant or insignificant difference between smartphone addiction and psychological well-being based by work status.

Judging from the domicile of residence, smartphone addiction has a significant difference and psychological well-being has an insignificant difference. This is possible because of the limitations faced in this study in the form of insufficient data distribution and most of the participants reside in Jakarta.

At the end of the discussion, the author realized the limitations of this study and that there were still various deficiencies in this study that could be corrected or examined further in future studies. This study has limitations in getting participants due to limited time and access caused by the COVID-19 pandemic so that the distribution and number of participants is limited.

3. CONCLUSION

This study aims to determine the relationship between smartphone phone addiction and psychological well-being in early adulthood. This study involved 91 research participants obtained through snowball sampling methods. The research was conducted with a non-experimental quantitative research design. This study found that there is no significant correlations

between smartphone addiction and psychological well-being in early adulthood.

Future research can study more about smartphone addiction especially in Indonesia because there are not many research yet about smartphone addiction in Indonesia. Future research could also research further about smartphone addiction and psychological well-being involving another addiction that contained in smartphone like game addiction, internet addiction, dan social media addiction.

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REFERENCES

- [1] Haug, S., Castro, R. P., Kwon, M., Filler, A., Kowatsch, T., & Schaub, M. P. (2015). Smartphone use and smartphone addiction among young people in Switzerland. *Journal of behavioral addictions*, 4(4), 299-307. <https://doi.org/10.1556/2006.4.2015.037>
- [2] Kompas. (2018, Mei 5). Penggunaan "Smartphone" di Genggaman Generasi Milenial. *Kompas*. https://kompas.id/baca/adv_post/penggunaan-smartphone-di-genggaman-generasi-millennial/
- [3] Kementerian Komunikasi dan Informatikan Republik Indonesia (Kominfo). (2017). *Survey Penggunaan TIK Serta Implikasinya terhadap Aspek Sosial Budaya Masyarakat*. Jakarta: Kementerian Komunikasi dan Informatika Republik Indonesia. https://balitbangsdm.kominfo.go.id/?mod=publikasi&a=dl&page_id=360&cid=9&download_id=187
- [4] Bian, M., & Leung, L. (2015). Linking loneliness, shyness, smartphone addiction symptoms, and patterns of smartphone use to social capital. *Social science computer review*, 33(1), 61-79. <https://doi.org/10.1177/0894439314528779>
- [5] Kwon, M., Lee, J. Y., Won, W. Y., Park, J. W., Min, J. A., Hahn, C., ... & Kim, D. J. (2013). Development and validation of a smartphone addiction scale (SAS). *PloS one*, 8(2), e56936. <https://doi.org/10.1371/journal.pone.0056936>
- [6] Lin, Y. H., Chang, L. R., Lee, Y. H., Tseng, H. W., Kuo, T. B., & Chen, S. H. (2014). Development and validation of the Smartphone Addiction

- Inventory (SPAI). *PLoS one*, 9(6), e98312. <https://doi.org/10.1371/journal.pone.0098312>
- [7] Griffiths, M. (1996). Gambling on the Internet: A brief note. *Journal of Gambling Studies*, 12(4), 471-473. <https://doi.org/10.1007/BF01539190>
- [8] Demirci, K., Akgönül, M., & Akpınar, A. (2015). Relationship of smartphone use severity with sleep quality, depression, and anxiety in university students. *Journal of behavioral addictions*, 4(2), 85-92. <https://doi.org/10.1556/2006.4.2015.010>
- [9] Thomée, S., Härenstam, A., & Hagberg, M. (2011). Mobile phone use and stress, sleep disturbances, and symptoms of depression among young adults—a prospective cohort study. *BMC public health*, 11(1), 66. <https://doi.org/10.1186/1471-2458-11-66>
- [10] Cha, S. S., & Seo, B. K. (2018). Smartphone use and smartphone addiction in middle school students in Korea: Prevalence, social networking service, and game use. *Health psychology open*, 5(1), <https://doi.org/10.1177/2055102918755046>
- [11] Matar Boumosleh, J., & Jaalouk, D. (2017). Depression, anxiety, and smartphone addiction in university students—A cross sectional study. *PLoS one*, 12(8), e0182239. <https://doi.org/10.1371/journal.pone.0182239>
- [12] Samaha, M., & Hawi, N. S. (2016). Relationships among smartphone addiction, stress, academic performance, and satisfaction with life. *Computers in Human Behavior*, 57, 321-325. <https://doi.org/10.1016/j.chb.2015.12.045>
- [13] Darcin, A. E., Kose, S., Noyan, C. O., Nurmedov, S., Yılmaz, O., & Dilbaz, N. (2016). Smartphone addiction and its relationship with social anxiety and loneliness. *Behaviour & Information Technology*, 35(7), 520-525. <http://dx.doi.org/10.1080/0144929X.2016.1158319>
- [14] Aker, S., Sahin, M. K., Sezgin, S., & Oguz, G. (2017). Psychosocial factors affecting smartphone addiction in university students. *Journal of Addictions Nursing*, 28(4), 215-219. doi: 10.1097/JAN.0000000000000197
- [15] Duke, É., & Montag, C. (2017). Smartphone addiction, daily interruptions and self-reported productivity. *Addictive behaviors reports*, 6, 90-95. <https://doi.org/10.1016/j.abrep.2017.07.002>
- [16] Lee, J., Sung, M. J., Song, S. H., Lee, Y. M., Lee, J. J., Cho, S. M., ... & Shin, Y. M. (2018). Psychological factors associated with smartphone addiction in south Korean adolescents. *The Journal of Early Adolescence*, 38(3), 288-302. <https://doi.org/10.1177/0272431616670751>
- [17] Ryff, C. D. (1995). Psychological well-being in adult life. *Current directions in psychological science*, 4(4), 99-104. <https://doi.org/10.1111%2F1467-8721.ep10772395>
- [18] Diener, E., Wirtz, D., Biswas-Diener, R., Tov, W., Kim-Prieto, C., Choi, D. W., & Oishi, S. (2009). New measures of well-being. In *Assessing well-being* (pp. 247-266). Springer, Dordrecht. https://doi.org/10.1007/978-90-481-2354-4_12
- [19] Kumcagiz, H., & Gündüz, Y. (2016). Relationship between Psychological Well-Being and Smartphone Addiction of University Students. *International Journal of Higher Education*, 5(4), 144-156. <http://dx.doi.org/10.5430/ijhe.v5n4p144>
- [20] Kwon, M., Kim, D. J., Cho, H., & Yang, S. (2013). The smartphone addiction scale: development and validation of a short version for adolescents. *PLoS one*, 8(12), e83558. <https://doi.org/10.1371/journal.pone.0083558>
- [21] Mumtaz, E.F. (2019). *Pengaruh Adiksi Smartphone, Empati, Kontrol Diri, dan Norma Terhadap Perilaku Phubbing Pada Mahasiswa Di Jabodetabek* (Skripsi, Universitas Islam Negeri Syarif Hidayatullah Jakarta).
- [21] Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology*, 57(6), 1069. <https://doi.org/10.1037/0022-3514.57.6.1069>