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Smartphone Addiction among Adolescence Students: Its Implication toward Family Communication, Learning Process, and Guidance and Counselling

(Kecanduan Ponsel Pintar pada Siswa Remaja: Kontribusi Terhadap Komunikasi dalam Keluarga, dan Implikasinya bagi Pembelajaran, Bimbingan dan Konseling)

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Abstract: The symptoms of smartphone addiction have been extensively observed in adolescent students. This study aims to investigate the effects of smartphone addiction on students' communication with their families, their learning, as well as guidance and counseling processes. The causal correlational design was applied, involving 103 participants selected total samplings of eighth-graders junior high school students. The data was garnered through the smartphone addiction scale and family communication scale. Both of those scales had item validity of 0.3, with Alpha Cronbach reliability of 0.937 and 0.850, respectively. The obtained data were analyzed using regression. The analysis results suggest that smartphone addiction significantly decreased the quality of students' communication with their families, by -0,416. This result can be fundamental for school counselors and the subject teachers in formulating and implementing the learning process, to reduce the effects of smartphone addiction, enhance their communication skills, and improve the learning efficiency through the use of the smartphone as learning media, instead of restraining the smartphone use.

Keywords: adolescence student; regression; smartphone addiction; family communication; teaching-learning

Abstrak: Dewasa ini, gejala kecanduan *smartphone* semakin meluas pada siswa remaja. Penelitian ini bertujuan untuk mengetahui kontribusi kecanduan *smartphone* terhadap kualitas komunikasi siswa dalam keluarga, dan membahas implikasinya bagi pembelajaran, serta bimbingan dan konseling. Rancangan kausal korelasional digunakan pada 103 responden siswa kelas delapan yang menggunakan smartphone lebih dari 5 jam sehari, yang dipilih secara total sampling di sekolah menengah pertama. Data dikumpulkan dengan skala kecanduan smartphone dan skala komunikasi dalam keluarga yang telah diuji, keduanya memiliki validitas butir lebih dari sama dengan 0,3, reliabilitas Alpha Cronbach 0,937 dan 0,850. Data dianalisis regresi. Hasil menunjukkan bahwa kecanduan *smartphone* berkontribusi signifikan menurunkan kualitas komunikasi siswa dalam keluarga sebesar -0,416. Implikasinya adalah konselor sekolah perlu berkolaborasi dengan guru bidang studi dalam menyusun dan melaksanakan program untuk mengurangi dampak negatif, meningkatkan kemampuan komunikasi, dan meningkatkan keefektifan pembelajaran dengan menggunakan *smartphone* sebagai media belajar, alih-alih membatasi penggunaannya baik di rumah maupun di kelas.

Kata kunci: siswa remaja; regresi; kecanduan *smartphone*; komunikasi keluarga; pembelajaran

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INTRODUCTION

Smartphone has indicated the current rapid development of communication technology. Different from a regular phone, a smartphone is equipped with extensive memory capacity, camera, internet connection, and numerous features, such as email, social media, games, maps, and so forth. In the United States of America, 72% of citizens use a smartphone (Poushter, 2016). Universally, this number of smartphone users has substantially grown (Slavin, 2019). In Indonesia, 98% out of 400 children and adolescents aged 10-19 years old concede that they have understood the internet, while 79.5% of them have become internet users (Gayatri, Rusadi, Meiningsih, Mahmudah, & Sari, 2016).

A survey from the Ministry of Communication and Informatics of the Republic of Indonesia (2017) signifies that half of Indonesia's society already has smartphones (66.31% from n = 6246). From the education perspective, 19.79, 19.02, and 19.67 % of smartphone users are elementary school, junior high school, and high school graduates, while 13.46 and 6.98% of them have bachelor's and master's or doctoral degrees, respectively, and 21.08% have no formal school background. Meanwhile, 13.97, 5.76, 19.07, 34.51, and 26.69 % of them spend < 1 hour, 1-3 hours, 3-5 hours, 5-10 hours, and >10 hours using a smartphone, respectively. They use a smartphone from their home (80.90%), workplace (17.90%), school/college (7.15%), and everywhere (89.63%). With the absence of Internet connection, 95.68, 41.06, 17.52, and 13.97% of the users use their smartphones for communication, entertainment, working, and learning. Meanwhile, with the internet connection, the users use the smartphone for communication (93.46%), entertainment (65.29%), browsing (76.88%), working (27.51%), and learning (25.70%).

As smartphone offers features facilitating communication and exploration of information, adolescents are inseparable from the smartphone. It simplifies the communication, searching of literature and information in the education, art, culture, social, politics, economy, and other fields (Irawan, 2014). These convenience and pleasure induce high time consumption, resulting in smartphone addiction. Smartphone addiction refers to smartphone use for more than five hours a day (James & Drennan, 2005). A study signifies that 290 adolescents aged 15-20 years old have used smartphones for more than five hours a day (Hasanah, Hijrianti, & Iswinarti, 2020), while 48% of 416 adolescents use the smartphone for more than four hours, daily (Aljomaa, Al.Qudah, Albursan, Bakhiet, & Abduljabbar, 2016).

Family refers to the relationship of a group of people bound by matrimony, blood ties, and commitment, that have lived together and shared their future for a long period of time (Galvin, Braithwaite, & Bylund, 2015). In a family, communication is defined as conversation or dialog between parents and children where they are free to express their experience, thought, feeling, and ambition in a friendly and attentive situation, full of acceptance.

Recently, smartphone use has been reported as the cause of decreasing face-to-face communications between parents and children (Alifiani, Nurhayati, & Ningsih, 2019; Lestari, Riana, & Taftazani, 2015; Nurchayati, 2017; Sarla, 2019). Both parents and children spend most of their time using a smartphone, rather than talking with their family (Ariani, 2018), thus, reducing the family time.

This study investigates the effects of smartphone addiction on the quality of junior high school students' family communication. The findings are expected to be used in formulating effective family communication, effective learning management by the teachers, and the design of guidance and counseling programs by the school counselors.

METHOD

This study used the causal correlational design, with a population of eight grade students considered as heavy smartphone users in a junior high school in Malang, East Java, Indonesia. The 270 eighth-graders were asked to fill out the checklist on their average daily use of a smartphone. The classification referred to criteria constructed by James and Drennan (2005), consisting of the low user (< 1.5 hours a day), the moderate user (between 1.5 to 5 hours a day), and heavy user (>5 hours a day). The results suggested that 103 students were smartphone users. Thus, a total sampling was used. The students' duration of smartphone usage is presented in Table 1.

Table 1. Duration of Smartphone Usage

Duration	F	%
< 1.5 hours	25 students	10.8
1.51 - 5 hours	102 students	44.3
5.1 - 8 hours	81 students	35.2
> 8 hours	22 students	9.5

The data were obtained using the smartphone addiction scale and family communication scales. The developed smartphone addiction scale, initially, had 30 items concerning six indicators, namely daily life disruption, positive anticipation, withdrawal, the orientation of cyber relationship, overuse of smartphones, and tolerance (Kwon et al., 2013). For the instrument validity, item correlation analysis was carried out, with minimum r count table > r table of 0.3120, for n = 40. The items were declared valid if the correlation value was > 0.3120 and vice versa. After a try-out involving 40 eighth graders with similar characteristics with the research population, 28 items were declared valid. Items number 3 and 24 were not used since they obtained lower correlation scores than 0.3. The scale had an Alpha Cronbach reliability score of 0.937. The results of item validity are presented in Table 2. The (*) marks the unused items (item numbers 3 and 24), due to their scores being lower than 0.3.

Table 2. Outline of Smartphone Addiction Scale After The Tryout

Variable	Indicator	Description	Fav	Total valid items
Smartphone addiction	A. Daily life disruption	a. Unable to finish a task punctually b. Difficulty to concentrate during the learning process c. Physical disturbance in using smartphone	1, 14 2, 15 3*, 16	5
	B. Positive anticipation	a. Excitement to use smartphone b. Smartphone usage as a media to release stress	4, 17, 27 5, 18	5
	C. Withdrawal	a. Uncomfortable feeling without smartphone b. Get irritated when feeling disturbed while using the smartphone c. Withdraw from the real association and prefer using smartphone	6, 19 7, 20 9, 22, 28	7
	D.Orientation of cyber relationship	a. Have a close relationship with social media b. Continuously checking their smartphone	10, 23 11, 24*	4
	E. Excessive usage	a. Excessive use of smartphone b. Encouragement to repeatedly use their smartphone	12, 25, 8, 29	3
	F. Tolerance	a. Obstacles in controlling smartphone use b. Inclination to continuously use smartphone	13, 26 21, 30	4
Total				28

The family communication quality scale was developed based on five indicators, namely openness, considerate, empathy, support, and impartiality (Rahmawati & Budiningsih, 2018). The try-out of the family communication scale and smartphone addition scale was carried out simultaneously. From 30 items, 24 items were classified as valid, while items number 8, 10, 23, 24, 25, and 29 had a lower inter-item correlation score than the 0.3 r table. Thus, those 6 items were not used. The results of the validity test are presented in Table 3, with (*) marks the invalid items, numbers 8, 10, 23, 24, 25, and 29.

The data were gathered by using Google Form in August 2021. Coordinated by the classroom teacher, the participant filled the scales through their smartphone from their homes with the teacher's supervision. They filled the scales within two weeks. The data were analyzed using regression. The assumption test used in this study were normality, linearity, heteroscedasticity, and regression feasibility tests.

Table 3. Outline of Family Communication Quality Scale After The Tryout

Variable	Indicator	Description	Fav.	Unfav.	Total valid items
Communication quality in the family	A. Openness	a. Willingness to open up to the other family members b. Willingness to communicate honestly	1,10* 2	19 11,20	5
	B. Considerate	a. Feel that they are heard b. Feel that their family understand them	3,21 22	12 4,13	5
	C. Empathy	a. Can relate to other people feeling b. Capable of positioning themselves in other people's shoes	23* 15,24*	5 28	3
	D. Supportive	a. Mutual support between family member b. Mutual appreciation between family member	6,14 16, 29*	25 7	5
	E. Impartiality	a. Accept other people b. Equal communication between children and parents	8*,17,26 9	30 18,27	6
Total					24

RESULTS

Results of Assumption Test

The Kolmogorov-Smirnov test with variables of smartphone addiction (X) and quality of students' communication in their family resulted in a significance score of 0.200 > 0.50, showing that those variables were normally distributed. The linearity and heteroscedasticity tests were carried out using a scatterplot chart (Field, 2017). The scatterplot graph illustrated in Figure 1 shows that the dots are spread randomly, forming no specific pattern. It showed no heteroscedasticity and linear relationship between X and Y variables. Table 4 shows an F value of 21.163 with sig = 0.000, indicating that the regression model has been fit (feasible).

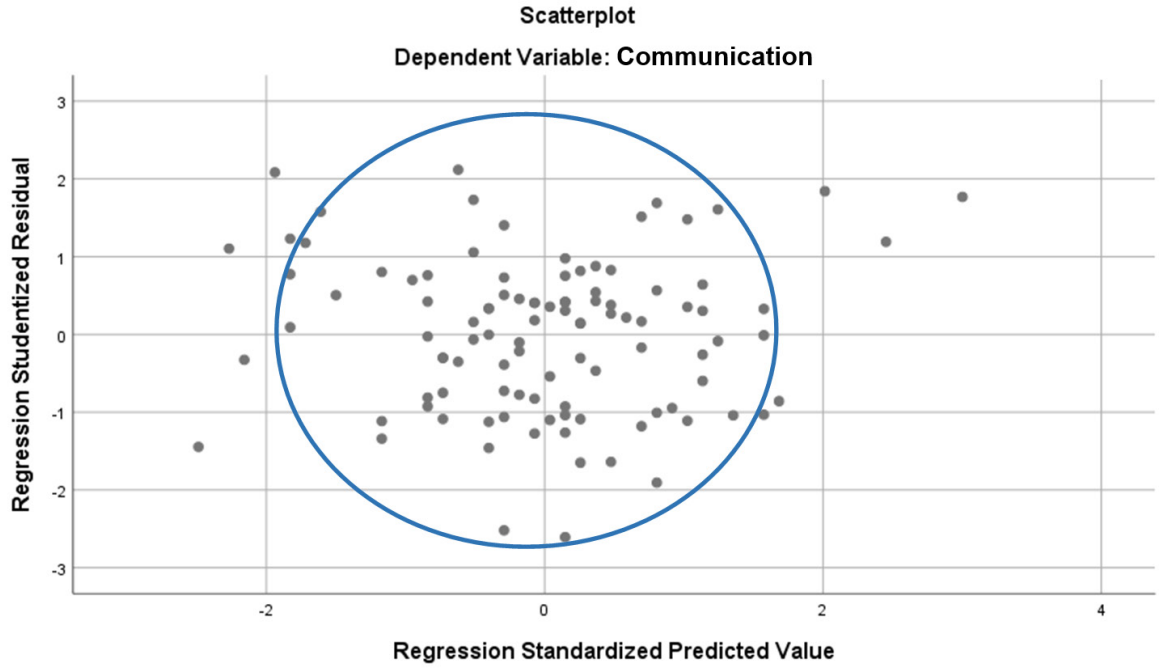

Figure 1. Scatterplot of Heteroscedasticity and Linearity Test

Table 4. Feasibility Test of The Regression Model (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1703.040	1	1703.040	21.163	0.000[b]
	Residual	8127.737	101	80.473		
	Total	9830.777	102			
a. Dependent Variable: communication						
b. Predictors: (Constant), addiction						

Results of the Hypothesis Test

Table 5 shows the constant value of = 95.289, B addiction = -0.449 (standardized Beta = -0, 416) and significance = 0.000. Thus, the H0 was rejected and H1 was accepted. It showed a significant negative contribution from smartphone addiction toward the quality of adolescent students' family communication. The regression formula is presented in Formula 1.

$$Y'' = (B_0 + B_1X_1) + \varepsilon rror \quad (1)$$

The regression model of students family communication quality = (95.289 + -0. 416X_1) + 0.098. In the summary model presented in Table 6, the obtained R square = 0,173 and adjusted R square = 0,165, with a difference of 0.008 (from 0.173 - 0.165 = 0.008) which is classified as very low.

Table 5. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	95.289	5.853		16.279	0.000
	Addiction	-0.449	0.098	-0.416	-4.600	0.000
a. Dependent Variable: communication						

Table 6. Model Summary[b]

Model	R	R Square	Adjusted R Square	Change Statistics			
				R Square Change	F Change	df2	Sig. F Change
1	0.416a	0.173	0.165	0.173	21.163	101	0.000
a. Predictors: (Constant), addiction							
b. Dependent Variable: communication							

DISCUSSION

As this study had fulfilled the normality, heteroscedasticity, and linearity tests, the regression model was feasible (fit), showing that the X variable (smartphone addiction) was the appropriate predictor of variable Y (quality of adolescent student's family communication). The difference between R square reduced by adjusted R square was 0.008, classified as very low. Field (2017) states that lower R square reduced by adjusted R square represents better model generalization to the population, and vice versa. Therefore, the regression model from 103 heavy smartphone users can be generalized to adolescent heavy smartphone users, indicating that 8 from 1000 students experience a variation of the predicted outcome.

From one predictor (smartphone addiction), the 0.173 R square change was obtained with a significance of 0.000. This score shows that additional predictors will result in 0 to 0.173 (175) of R square score within the regression model, remaining significant in the 0.000 level.

The results of the assumption test had fulfilled the requirement so that the regression model was feasible. The obtained R square, adjusted R square, and R square change shows that the proposed regression model and the findings (constant and beta) have fulfilled the academic requirements and can be generalized to the adolescent junior high school students population who experienced smartphone addiction.

The intersection degree between the predictor and criterion variables within the regression model is represented by the constant, while the beta value shows the correlation degree and direction, positive or negative correlation (Field, 2017). This study obtained a constant of 95.289 and a beta value of -0.416. The value indicates significant effects of smartphone addiction in decreasing students' communication quality in their families. The high beta value of -0,416 with a significance of 0.00 < 0.05, implied that smartphone addiction reduced 41.6% of students' communication quality in their family.

In addition, the beta value also demonstrates that in every one level increase of smartphone addiction, the quality of students' family communication decreases by 0.416 times of communication quality standard deviation. The standard deviation of communication quality is 9.8 (mean = 68.6), so the smartphone addiction contribution toward students' decreasing family communication quality is four times of Y predicted score (from -0.416 x 9.8 = -4.7, made into -4). The negative contribution signifies that higher smartphone addiction lowers students' communication quality with their families, by four times or 41.6%. Other studies also suggest that smartphone addiction carries a negative contribution to family communication (Guo et al., 2019; Nurchayati, 2017; Seo & Bang, 2017).

Effects of Smartphone Addiction on Effective Learning

People with smartphone addiction are unable to control their smartphone use (Haug et al., 2015), presented by their failure to reduce the time they spend using smartphones and get ecstatic when using a smartphone, compared to when they are with their family or friends (Cho & Lee, 2015). For students, smartphone addiction disrupts their daily activities, such as their unfinished daily tasks or assignments, sloppy diet, messy sleep patterns, and so forth (Lestari et al., 2015). Their long period usage of smartphones results in physical exhaustion, reduced sleeping hours, depression, lower academic achievement, and even lower life satisfaction (Hawi & Samaha, 2016; Kim, 2013; Lin et al., 2015; Raza, Yousufi, Rafi, & Javaid, 2020; Samaha & Hawi, 2016; Sunday, Adesope, & Maarhuis, 2021). Another study presents that a long period of smartphone use may affect students' concentration during the learning process (Manumpil, Ismanto, & Onibala, 2015). Further, adolescents with smartphone addiction are reported to have low academic achievement, unsatisfied with their academic lives, and have a distant relationship with their family (Lee & Lee, 2017).

A number of factors cause smartphone addiction in adolescents, namely the internal, social, and external factors (Lestari et al., 2015). The internal factor covers sensation seeking and low self-control, while the social factor contains the connected presence which represents the inclination to socially interact in the virtual world. The external factors consist of smartphone ability to provide stimulating information, various features, and situational factors especially boring learning burden. In an interview, the students admitted that they used smartphones for more than 5 hours daily because of the boredom of online learning, having no friends during the pandemic, no outdoor activities, and online game addiction.

The prevalence of smartphone addiction among students is around 48% (Aljomaa et al., 2016). During the pandemic situation, all junior high schools in Indonesia conduct online learning that results in students' increased use of the smartphone, so smartphone addiction is predicted to accelerate. Consequently, this phenomena carries negative effects on the quality of students' communication in their family and surrounding environment (Guo et al., 2019; Nurchayati, 2017; Seo & Bang, 2017). Besides, the higher smartphone addiction level also causes fatigue, low sleeping hour, depression, reduced academic achievement, low life satisfaction, disrupted daily activities (unfinished tasks or assignments), sloppy diet, and distant relationships with their family. Smartphone addiction also correlates with boring online learning, as well as a minimum to no outdoor activities and friends, during the pandemic.

Those negative effects are predicted to be experienced by more adolescents with higher severity. Therefore, in planning the learning process, the teacher should consider the time spent by students to operate a smartphone. First, teachers should identify the number of students with more than 5 hours of smartphone daily use, the information they accessed, their activities in the virtual world, and the materialized negative effects. Second, the teacher should understand students' conditions and aid them in reducing the negative effects, such as for students physical exhaustion, they should provide specific recess periods during the learning process. Third, the teachers should adopt motivational classroom management using smartphones (Asplund & Kontio, 2020). It is linear with the gradual adoption of technology in the learning process of schools in the United States of America (Slavin, 2019). Thus, the smartphone should be integrated into the learning process. The teacher should no longer oppose the use of smartphones in the classroom, they should rather employ smartphones as the learning media. The smartphone can be used to download videos relevant to the learning, deliver more compelling material, communicate assignments, and discuss thought-provoking ideas related to the learning. For instance, after students finish their assignments correctly, teachers may let them play a regulated game. Fourth, during the learning, the teachers should aid the students to search and use credible sources of information, such as official government sources, reference books, and credible websites. Teachers should guide students to critically identify and select correct or wrong, useful or useless information, and use the information wisely.

Effects of Smartphone Addiction on School Guidance and Counselling Services

Family communication has an essential role in adolescent development (Álvarez-García, González-Castro, Núñez, Rodríguez, & Cerezo, 2019; Cai et al., 2021; Faltýnková, Blinka, Ševčíková, & Husarova, 2020). Proper communication facilitates students to freely communicate their thought and feeling, while also helping the teacher to understand the students' eagerness. Besides, through great communication, each family member can understand their role, expectation, regulation, and habituate them to form and regulate the relationship with other people. Great family communication is illustrated from their intensity, openness, discussion on various aspects, equal respect, as well as parents who do not control and restrict their children (Aramburu Alegret et al., 2020; Jafarnezhad, Asadiyonesi, & Rastgoomoghadam, 2015).

Good family communication affects children's behavior, especially when they become adults as communication with parents tremendously affects children's development and moral formation, thus, parents should direct and help children to comprehend the concept of good and bad in various aspects (Sumartono, 2017). A study has reported that low-intensity family communication makes the children receive limited attention and guidance, resulting in greater chances for children to consume alcohol and drugs, be involved in fights, bullying, and so forth (Sambuaga, 2014).

Smartphone has been widely used by an adolescent with a high duration (more than 5 hours a day). This long period of smartphone usage reduces adolescent students' communication quality with their families. Low-quality family communication induces students to feel left out, and receive minimum guidance and attention, while also opening their chances to do negative behavior. Besides, the findings also suggest that smartphone addiction negatively impacted students' academic learning outcomes.

School counselors should organize a guidance and counseling service, collaborating with the subject teachers. The collaboration can be initiated by planning students' need assessment related to smartphone use, family communication, as well as their learning motivation and behavior. Further, another collaboration is required in formulating the instrument (scale) to obtain students' data, analyze the data, and summarize the programs appropriate for students' needs. According to the need analysis, the subject teachers should collaborate with the school counselors in providing guidance services, such as guidance to wisely use a smartphone, have better learning time management and enhance students' direct or virtual communication skills. The subject teachers can also help identify students with heavy smartphone addiction who have issues with physical health and learning process, requiring counseling service from the school counselors.

CONCLUSION

Smartphone addiction is predicted to reduce the quality of students' communication with their families by 41.6%. Studies have also confirmed that smartphone addiction carries negative effects on students' physical, emotional, and learning behavior, as well as on the learning process. Therefore, school counselors should cooperate with the subject teacher in decreasing the negative effects of the smartphone, enhancing students' communication skills, increasing learning effectivity, and optimizing students' academic achievement without prohibiting the use of smartphones at school and home.

REFERENCES

Alifiani, H., Nurhayati, N., & Ningsih, Y. (2019). Analisis penggunaan gadget terhadap pola komunikasi keluarga. *Faletehan Health Journal, 6*(2), 51–55. https://doi.org/10.33746/fhj.v6i2.16

Aljomaa, S. S., Al.Qudah, M. F., Albursan, I. S., Bakhiet, S. F., & Abduljabbar, A. S. (2016). Smartphone addiction among university students in the light of some variables. *Computers in Human Behavior, 61*, 155–164. https://doi.org/10.1016/j.chb.2016.03.041

Álvarez-García, D., González-Castro, P., Núñez, J. C., Rodríguez, C., & Cerezo, R. (2019). Impact of family and friends on antisocial adolescent behavior: The mediating role of impulsivity and empathy. *Frontiers in Psychology*, 10. https://doi.org/10.3389/fpsyg.2019.02071

Aramburu Alegret, I., Pérez-Testor, C., Mercadal Rotger, J., Salamero Baró, M., Davins Pujols, M., Mirabent Junyent, V., … Brodzinsky, D. (2020). Influence of communicative openness on the psychological adjustment of internationally adopted adolescents. *Journal of Research on Adolescence, 30*, 226–237.

Ariani, A. S. (2018). *Media sosial pangkas kebersamaan orangtua dan anak*.

Asplund, S.-B., & Kontio, J. (2020). Becoming a construction worker in the connected classroom: Opposing school work with smartphones as happy objects. *Nordic Journal of Vocational Education and Training*, 65–94. https://doi.org/10.3384/njvet.2242-458X.2010165

Cai, J., Wang, Y., Wang, F., Lu, J., Li, L., & Zhou, X. (2021). The association of parent-child communication with internet addiction in left-behind children in China: A Cross-Sectional Study. *International Journal of Public Health, 66*. https://doi.org/10.3389/ijph.2021.630700

Cho, S., & Lee, E. (2015). Development of a brief instrument to measure smartphone addiction among nursing students. *CIN: Computers, Informatics, Nursing, 33*(5), 216–224.

Faltýnková, A., Blinka, L., Ševčíková, A., & Husarova, D. (2020). The associations between family-related factors and excessive internet use in adolescents. *International Journal of Environmental Research and Public Health, 17*(5), 1754. https://doi.org/10.3390/ijerph17051754

Field, A. (2017). Discovery Statistic Using IBM SPSS Statistic. Los Angeles: SAGE Publications.

Galvin, K. M., Braithwaite, D. O., & Bylund, C. L. (2015). *Family communication: Cohesion and change*. Routledge.

Gayatri, G., Rusadi, U., Meiningsih, S., Mahmudah, D., & Sari, D. (2016). Digital citizenship safety among children and adolescents in Indonesia. *Jurnal Penelitian dan Pengembangan Komunikasi dan Informatika, 6*(1).

Guo, N., Wang, M. P., Luk, T. T., Ho, S. Y., Fong, D. Y. T., Chan, S. S., & Lam, T. H. (2019). The association of problematic smartphone use with family well-being mediated by family communication in Chinese adults: A population-based study. *Journal of Behavioral Addictions, 8*(3), 412–419. https://doi.org/10.1556/2006.8.2019.39

Hasanah, U., Hijrianti, U. R., & Iswinarti, I. (2020). Pengaruh smartphone addiction terhadap perilaku agresif pada remaja. *Proyeksi: Jurnal Psikologi, 15*(2), 182–191.

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

Hawi, N. S., & Samaha, M. (2016). To excel or not to excel: Strong evidence on the adverse effect of smartphone addiction on academic performance. *Computers & Education, 98*, 81–89. https://doi.org/10.1016/j.compedu.2016.03.007

Irawan, R. E. (2014). Aplikasi citizen journalism di era konvergensi media. *Humaniora, 5*(2), 816–821.

Jafarnezhad, K., Asadiyonesi, M. R., & Rastgoomoghadam, M. (2015). The relationship between family communication patterns and frequency and intensity of parent-adolescent conflict. *J Fam Res, 11*, 219–235.

James, D., & Drennan, J. (2005). Exploring addictive consumption of mobile phone technology. *Journal of Adolescence, 27*(1), 87–96.

Kim, H. (2013). Exercise rehabilitation for smartphone addiction. *Journal of Exercise Rehabilitation, 9*(6), 500–505. https://doi.org/10.12965/jer.130080

Kominfo. (2017). *Survey penggunaan TIK: Serta implikasinya terhadap aspek sosial budaya masyarakat*.

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.

Lee, C., & Lee, S.-J. (2017). Prevalence and predictors of smartphone addiction proneness among Korean adolescents. *Children and Youth Services Review, 77*, 10–17. https://doi.org/10.1016/j.childyouth.2017.04.002

Lestari, I., Riana, A. W., & Taftazani, B. M. (2015). Pengaruh gadget pada interaksi sosial dalam keluarga. *Prosiding Penelitian dan Pengabdian Kepada Masyarakat, 2*(2), 204–209.

Lin, Y.-H., Lin, Y.-C., Lee, Y.-H., Lin, P.-H., Lin, S.-H., Chang, L.-R., … Kuo, T. B. J. (2015). Time distortion associated with smartphone addiction: Identifying smartphone addiction via a mobile application (App). *Journal of Psychiatric Research, 65*, 139–145.

Manumpil, B., Ismanto, A. Y., & Onibala, F. (2015). Hubungan penggunaan gadget dengan tingkat prestasi siswa di SMA Negeri 9 Manado. *Jurnal Keperawatan, 3*(2).

Nurchayati, Z. (2017). Dampak penggunaan gadget pada anak di bawah umur terhadap komunikasi keluarga dalam pembentukan karakter. *Jurnal Sosial, 17*(2).

Poushter, J. (2016). Smartphone ownership and internet usage continues to climb in emerging economies. *Pew Research Center, 22*(1), 1–44.

Rahmawati, N., & Budiningsih, T. E. (2018). Hubungan antara kualitas komunikasi anak dan orang tua dengan kebiasaan belajar siswa SMP N 13 Semarang tahun ajaran 2011-2012. *Intuisi: Jurnal Psikologi Ilmiah, 4*(1), 38–43.

Raza, S. A., Yousufi, S. Q., Rafi, S. M. T., & Javaid, S. T. (2020). Impact of smartphone addiction on students' academic achievement in higher education institute of Pakistan. *Journal of Education & Social Sciences, 8*(1), 1–14. https://doi.org/10.20547/jess081200810

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

Sambuaga, D. P. (2014). Peranan komunikasi keluarga dalam mencegah perkelahian antar warga (studi kasus di Kelurahan Mahakeret Barat). *Acta Diurna Komunikasi, 3*(4), 1–15.

Sarla, G. S. (2019). Excessive use of electronic gadgets: health effects. *The Egyptian Journal of Internal Medicine, 31*(4), 408–411. https://doi.org/10.4103/ejim.ejim_56_1

Seo, G.-S., & Bang, S. Y. (2017). The relationship among smartphone addiction, life stress, and family communication in nursing students. *Journal of the Korea Academia-Industrial Cooperation Society, 18*(4), 398–407. https://doi.org/10.5762/KAIS.2017.18.4.398

Slavin, R. E. (2019). *Educational psychology: Theory and practice*.

Sumartono, S. (2017). Kualitas komunikasi keluarga dan tingkat keakraban pada anak. *Komunikologi: Jurnal Ilmiah Ilmu Komunikasi, 14*(2), 44–51.

Sunday, O. J., Adesope, O. O., & Maarhuis, P. L. (2021). The effects of smartphone addiction on learning: A meta-analysis. *Computers in Human Behavior Reports, 4*, 100114. https://doi.org/10.1016/j.chbr.2021.100114