

Relationship Between Duration of Gadget Use and Insomnia Incidence in Adolescents at Junior High School Betzata ABD Leilem

by Eireine Maria Pandoh

Submission date: 04-Sep-2024 10:27AM (UTC+0700)

Submission ID: 2444500298

File name: JURNAL_INTER_KESEHATAN_2024_Eireine_Maria_Pandoh.doc (94K)

Word count: 4446

Character count: 24526

Relationship Between Duration of Gadget Use and Insomnia Incidence in Adolescents at Junior High School Betzata ABD Leilem

Eireine Maria Pandoh^{1*}

^{1*}Health Informatics Study Program, Sekolah Tinggi Ilmu Kesehatan Gunung Maria Tomohon

*correspondence email: mariairenpanдох@gmail.com

Abstract. Many teenagers now spend most of their time playing gadgets. The teenagers can spend all day playing gadgets. Using for a long time causes them to take about 60 minutes longer to fall asleep than usual, resulting in them experiencing insomnia. The purpose of this study is to determine the relationship between the duration of gadget use and the incidence of insomnia in adolescents at Betzata ABD Leilem Junior High School. Sampling in this study with the Slovin formula, as many as 62 respondents. Data collection using questionnaires via google forms. The data analysis in this study was univariate and bivariate analysis (Chi square test) measuring the relationship between each variable with a value $\alpha = 0.05$. The results of the study were obtained, there was a relationship between the duration of gadget use and the incidence of insomnia with a value $= 0.06$ (value < 0.05). The conclusion in this study is that there is a relationship between the duration of gadget use and the incidence of insomnia in adolescents at Betzata ABD Leilem Junior High School.

Keywords : Gadgets, Insomnia, Teenagers

INTRODUCTION

A study conducted by the Associated Chamber of Commerce and Industry of India in 2012 on research conducted on 2000 teenagers in India, aged 12-20 years, found that the majority of respondents stated that prolonged use of gadgets, including at night, had caused teenagers to experience insomnia, depression, and poor personal relationships (Firman & Ngasis, 2012, quoted by Syamsuodin, 2015).

Global smartphone usage in 2019 exceeded three billion people and is predicted to continue to increase. Indonesia is one of the countries with the largest number of smartphone users in the world. In 2016, data showed that smartphone usage reached 99.5 million, this caused an increase of 25.8 million smartphone users from the previous year. As many as 150.5 million Indonesians in 2018 used smartphones and in 2019 there was an increase of around 171.2 million people. So that in 2025 smartphone users in Indonesia are predicted to reach 256.1 million people (KPAI, 2020)

The National Sleep Foundation (2018) stated that the incidence of insomnia worldwide is 67% of 1,508 people. In the Southeast Asia region, especially in Indonesia, the prevalence of insomnia is around 67%, where 55% experience mild insomnia and 23.3%

experience severe insomnia. The prevalence of insomnia in adolescents is 73.3% (Fernando, 2020).

²⁹ The Director General of Public Information and Communication of the Ministry of Communication and Informatics (Kominfo), stated that in 2015, mobile phone users in Indonesia were estimated to be 270 million gadgets used by the Indonesian population, which exceeded the Indonesian population of only around 250 million people. Gadget users in Indonesia are dominated by teenagers aged 15-19 years at 80% (Kemenkominfo, 2014).

¹⁶ Based on the results of an inter-provincial survey conducted by ¹⁶ the Indonesian Internet Service Providers Association, the North Sulawesi region shows that overall, industrial circles in North Sulawesi already know about the internet, most of whom are young people with an average age of 12-29 years (APJII, 2012, quoted by Syamsuodin, 2014).

The prevalence of sleep pattern disorders worldwide is around 86%, the prevalence of sleep disorders in Indonesia is estimated to reach 10%. The prevalence of sleep quality disorders in adolescents from various studies shows varying results, 21.2% of adolescents in Beijing experience sleep quality disorders. Middle School and High School students show a prevalence of sleep quality disorders ranging from 15.3% to 39.2%. This sleep disorder is common, but repeated occurrences can affect a person's energy, mood, productivity, and cognitive abilities (Rheza, Maulana Okta.2022).

¹² Several factors can affect insomnia, including illness, fatigue, environment, stress, medication, diet, alcohol and nicotine. Gadget use can also affect insomnia, because addiction to gadget bluelight will shift sleep rhythms and cause insomnia. Such as a study conducted on students of Senior High School Advent Klabat Manado which showed the results of the duration of gadget use affecting insomnia, this is similar to previous ⁴² research conducted by Syamsuodin, et al (2015), that ¹⁸ the use of social media affects insomnia (I Gede Purnawinadi & Sali, 2020). Based on the background above, the purpose of this study was to determine the relationship between the duration of gadget use and the incidence of insomnia in adolescents at Junior High School Betzata ABD.

LITERATURE REVIEW

In recent years, the widespread use of gadgets, including smartphones, tablets, and laptops, has become increasingly prevalent among adolescents. These devices are integral to their daily lives, serving as tools for communication, entertainment, education, and social interaction. However, the increasing duration of gadget use has raised ⁵³ concerns about its impact on the health and well-being of young people. Among the various health issues

associated with excessive gadget use, sleep disturbances, particularly insomnia, have emerged as a significant concern. Adolescents are particularly vulnerable to these effects due to their developmental stage, which makes them more susceptible to the negative impacts of prolonged screen time.

Sleep is a critical component of adolescent health, playing a vital role in physical, emotional, and cognitive development. Insomnia, characterized by difficulty falling asleep, staying asleep, or waking up too early, can have detrimental effects on adolescents' overall health. Chronic insomnia has been linked to various adverse outcomes, including poor academic performance, mood disorders, and increased risk of developing chronic health conditions. The relationship between sleep and gadget use has been the subject of numerous studies, with evidence suggesting that prolonged exposure to screens, particularly before bedtime, is a key factor contributing to the incidence of insomnia among adolescents.

The mechanisms through which gadget use contributes to insomnia are multifaceted. One of the primary factors is the exposure to blue light emitted by screens, which can interfere with the production of melatonin, the hormone responsible for regulating sleep-wake cycles. Blue light exposure in the evening can delay the onset of sleep, reduce sleep duration, and alter the natural circadian rhythm, leading to sleep disturbances. Additionally, the stimulating content of many digital activities, such as gaming or social media, can increase cognitive arousal, making it more difficult for adolescents to wind down and fall asleep. This heightened state of alertness can persist even after the device is turned off, further contributing to difficulties in initiating and maintaining sleep.

The duration of gadget use is a critical factor in determining its impact on sleep quality. Studies have consistently shown that longer periods of screen time are associated with an increased risk of insomnia and other sleep disturbances. For instance, research indicates that adolescents who use gadgets for more than two hours before bedtime are significantly more likely to experience delayed sleep onset, reduced sleep duration, and poor sleep quality. The relationship between the duration of gadget use and sleep disturbances is dose-dependent, meaning that as the duration of use increases, the severity of sleep problems also escalates. This highlights the importance of monitoring and limiting screen time, particularly in the hours leading up to bedtime, to mitigate the risk of insomnia.

The impact of insomnia on adolescent health extends beyond the immediate effects on sleep. Chronic sleep deprivation can impair cognitive functioning, leading to difficulties in concentration, memory, and learning. It can also contribute to emotional disturbances, such as anxiety and depression, which are prevalent among adolescents. Furthermore, insomnia can weaken the immune system, making adolescents more susceptible to illnesses and infections. The long-term consequences of poor sleep in adolescence can persist into adulthood, increasing the risk of developing chronic health conditions, such as cardiovascular disease and metabolic disorders. Therefore, addressing the issue of gadget use and its impact on sleep is crucial for safeguarding the health and well-being of adolescents.

In conclusion, the relationship between the duration of gadget use and the incidence of insomnia in adolescents is well-established, with evidence pointing to the detrimental effects of prolonged screen time on sleep quality. Given the pervasive nature of gadgets in the lives of adolescents, it is essential to raise awareness about the potential risks associated with excessive use, particularly before bedtime. Schools, parents, and healthcare providers should work together to educate adolescents about healthy screen habits and the importance of maintaining a regular sleep schedule. Implementing guidelines for limiting screen time, especially in the evening, can help reduce the incidence of insomnia and promote better sleep health among adolescents at Junior High School Betzata Abd Leilem and beyond.

METHODS

This type of research is quantitative using an analytical observational method with a cross-sectional approach. The research was conducted at Junior High School Betzata ABD Leilem in August 2024. The sample in this study was part of the population taken using the Slovin formula and considering the inclusion criteria, so that 62 students were obtained as respondents. The independent or free variable is the use of gadgets and the dependent or dependent variable is the incidence of insomnia. The measurement variable uses a standard questionnaire that has passed the validity and reliability test. The measurement method uses a questionnaire and the analysis of the research data uses univariate analysis to see the characteristics of the respondents, and the bivariate test uses the chi square test.

RESULTS

1. Respondent Characteristics

Respondents in this study were students of Junior High School Betzata ABD Leilem who met the inclusion criteria of the study who were asked to fill out a questionnaire in the form of a google form during the study. The distribution of respondents from each research variable has characteristics consisting of: age, gender, class, gadget use, and insomnia.

Table 1. Distribution of Respondents' Age

Age	n	%
11 years old	5	8.1
12 years old	19	30.6
13 years old	31	50
14 years	7	11.3
Total	62	100

Based on the data in table 1, it shows that the distribution of the ages of the respondents is that the largest number of respondents is 13 years old, namely 31 respondents, and the smallest number of respondents is 5 respondents, who are 11 years old.

Table 2. Distribution of Respondents by Gender

Gender	n	%
Woman	43	69.4
Man	19	30.6
Total	62	100

Based on the data in table 2, it shows that the distribution of respondents' gender is that the largest number of respondents is female, with 43 respondents, and the smallest number of respondents is male, with 19 respondents.

Table 3. Class Characteristics

class	n	%
7 A	11	17.7
7 B	13	21
8 A	16	25.8
8 B	12	19.4
9 A	7	11.3
9 B	3	4.8
Total	62	100

Based on the data in table 3, it shows that the distribution of the largest number of respondents is in class 8A with 16 respondents, and the smallest number is in class 9B with 3 respondents.

2. Univariate Analysis

A. Use of Gadgets

Gadget usage in Betzata ABD Leilem Junior High School students was measured using a standardized questionnaire. There were 15 questions regarding gadget usage in the questionnaire. The questionnaire in the questions used a Likert scale with five answer choices, namely Strongly Agree = 5, Agree = 4, Disagree = 3, Disagree = 2, Strongly Disagree = 1. The results of the respondents' answers were added up and determined the

median value to group respondents based on good gadget usage with a median value > 56 and categorized as bad if the median value < 56. The table below will describe the distribution of respondents based on the influence of gadget usage.

Table 4. Use of Gadgets

Use of Gadgets	n	%
Often	46	74.2
Seldom	16	25.8
Total	62	100

Based on the data in table 4, it shows that the distribution of respondents based on gadget usage is that 46 respondents said that they often use gadgets, and 16 respondents said that they rarely use gadgets.

B. Insomnia Occurrence

The incidence of insomnia in Betzata ABD Leilem Middle School students was measured using a standardized questionnaire. There were 8 questions regarding the incidence of insomnia in the questionnaire. The questionnaire in the questions used a Likert scale with five answer choices, namely Strongly Agree = 5, Agree = 4, Disagree = 3, Disagree = 2, Strongly Disagree = 1. The results of the respondents' answers were added up and determined the median value to group respondents based on good gadget use with a median value > 26 and categorized as bad if the median value < 26. The table below will describe the distribution of respondents based on the incidence of insomnia.

Table 5. Insomnia Incident

Insomnia Incident	n	%
Insomnia	35	56.5
No Insomnia	27	43.5
Total	62	100

Based on the data in table 5, it shows that the distribution of respondents based on insomnia incidents is that 35 respondents experienced insomnia and 27 respondents did not experience insomnia due to gadget use.

3. Bivariate Analysis

This study uses bivariate analysis to determine the relationship between gadget use and insomnia in students of Junior High School Betzata ABD Leilem. This analysis uses the chi square test, based on the results of the crosstab test seen in the table Gadget use and insomnia incidence.

10

Table 6. The relationship between gadget use and insomnia in junior high school students Bethzata ABD Leilem.

Use of Gadgets	Insomnia Incident				Total		p value
	Insomnia		No Insomnia				
	n	%	n	%	n	%	
Often	25	40.3	21	33.9	46	74.2	0.006
Seldom	10	16.1	6	9.7	16	25.8	
Total	35	100	27	100	62	100	

Based on the data in the table above, the results of the analysis of the relationship between gadget use and insomnia in students of Betzata ABD Leilem Middle School, found that 25 respondents stated that they often used gadgets and experienced insomnia, and 6 respondents stated that they rarely used gadgets and were included in the category of no insomnia.

DISCUSSION

1. Respondent Characteristics

Respondents in this study were students at Junior High School Betzata ABD Leilem who were taken when the researcher conducted the research that met the inclusion and exclusion criteria. The number of respondents in this study was 62 respondents. The characteristics of respondents in this study were categorized by age, gender and class.

Respondent characteristics based on age, this study was conducted among junior high school students. Betzata ABD Leilem who is included in the adolescent group and the following is a description of the age of the respondents in this study, most of the respondents in this study were 13 years old, namely 31 respondents, and the fewest respondents in this study were 14 years old, namely 7 respondents.

Respondent characteristics based on gender, based on the results of research conducted at junior high schools Betzata ABD Leilem, most of the respondents in this study were female, namely 43 respondents, and the fewest were male respondents, namely 19 respondents.

Respondent characteristics based on class, based on the results of the research conducted by researchers, taking samples from all classes in junior high schools. Betzata ABD Leilem, and the selection of respondents taken according to the inclusion criteria, the results of the study found that most of the respondents in this study were in class 8A, namely 16 respondents, and the least were in class 9B, namely 3 respondents.

2. Univariate Analysis

1. Use of Gadgets

Gadgets are objects or goods that are specifically created in this advanced era with the aim of helping everything to be easier, more effective and more efficient when compared to previous technologies. The form of gadgets themselves is very diverse, ranging from laptops, smartphones, iPads, and tablets. Gadgets in this increasingly developing era have positive and negative impacts on their users, both among children and adults who currently live side by side with gadgets or cannot be separated from gadgets. Based on research conducted by Rideout (2016) which examined the impact on school students of playing gadgets for too long, based on the study it was found that teenagers aged 12 to 14 years spent their time in front of the screen for 2 to 58 minutes every day and teenagers aged 15 to 17 years spent time in front of the screen for 3 hours 21 minutes every day. This is contrary to the opinion of Starburger (2017) who stated that teenagers should only be in front of the screen <2 hours every day.

Based on the results of research conducted at junior high school Betzata ABD obtained most respondents often use gadgets, namely 46 respondents, and respondents who rarely use gadgets are 16 respondents. So based on the results of this study it can be concluded that most students at Junior High School Betzata ABD often use gadgets.

The results of this study are related to research conducted by Salsabila (2010) who studied the increasingly rapid needs of adolescents due to gadgets, stating that the length or duration of gadget use by adolescents can have an influence on their development. A similar thing was said by Saifullah (2017) who studied the relationship between the duration of gadget use and sleep patterns in children, stating that the level of gadget addiction in children, most of which is 51.4%, is at the level moderate addiction, where the level of gadget addiction of female students is higher than male students.

2. Insomnia Occurrence

Insomnia Incident

Insomnia is a common sleep problem, characterized by difficulty for someone to sleep in terms of quality and quantity. The requirements for good sleep are between 6 hours and 8 hours. Based on the results of research conducted by (Eliza, et al., 2022), it shows that factors related to the incidence of insomnia in adolescents are based on urban/rural areas, student class levels, use of gadgets to access social media, gadget addiction and internet addiction.

Based on the results of the study conducted on students at Junior High School Betzata ABD Leilem, it was obtained that 35 respondents experienced insomnia and 27 students did not experience insomnia. It can be concluded that most of the students in this study experienced insomnia.

³⁶ This is in line with the results of a survey conducted by Kominfo in 2017 showing that smartphone ownership is higher in urban areas than in rural areas. Research conducted by Rheza (2022) shows that there is a difference in the proportion of sleep disorders between adolescents in urban and rural areas. This could be caused by the role and habits within the family. People who live in rural areas have faster sleep quality. in addition, monitoring of parental activities that prohibit children from leaving the house at night.

3. Bivariate Analysis

⁴ Based on the results of the study that has been conducted to see the relationship between the influence of gadgets and the incidence of insomnia in students at Junior High School Betzata ABD Leilem, it was obtained that 25 respondents often used gadgets and experienced insomnia, 10 respondents rarely used gadgets but experienced insomnia, and 21 respondents often used gadgets but did not experience insomnia, and 6 respondents rarely used gadgets and did not experience insomnia.

³⁵ Based on the results of statistical tests that have been carried out by researchers using *chi square test* then it was found that the p value was less than 0.05 so it can be concluded that there is a significant relationship between gadget use and the incidence of insomnia in students of Betzata ABD Leilem Middle School.

¹¹ Based on the results of this study, it can be concluded that most respondents who frequently use gadgets experience insomnia. This is because most respondents already have their own gadgets, making it easier for them to access various features such as social media and online games. Ownership of gadgets in teenagers or school children today is a must because the development of the era that requires everything to be related to technology so that it has an impact on the emergence of various health problems, one of which is insomnia. Which can affect a person's health as well as academic achievement for students.

²¹ The results of this study are in accordance with research conducted by Kharisma, et al. (2011) stating that the behavior of using gadgets continuously and uncontrolled can cause the brain to continue to produce dopamine in abnormal amounts, which can make someone continue to look for causes of pleasure and satisfaction that must be fulfilled, so that the behavior of playing gadgets can become uncontrolled. The impact is that someone can experience addiction that leads to Impulse Control Disorder (ICD), which is a condition where someone has problems controlling their emotions and behavior so that it leads to negative actions that are detrimental to themselves, such as ignoring eating and sleeping.

The same thing is in line with research conducted by (Tamil, etc., 2021) stating that overall students experience insomnia because 20% of participants use their gadgets to play games, 10% for research activities, 19% for reading, 16% for listening to music and 12% for messages during the pandemic. The average time spent attending online classes and webinars is 33% while 35% of time on gadgets is spent on social media handles. The various types of applications provided in gadgets make teenagers use gadgets more for various activities such as reading online magazines, playing games, chatting, and other online media sites.

This is in line with the opinion expressed by AW. Bernard (2009), stating that the occurrence of insomnia is caused by the duration of using gadgets as a phenomenon involved in stimulating actions towards certain goals that were previously small or no movement at all towards certain goals. Supported by researchers Omega T who studied the relationship between the length of use of gadgets and the occurrence of insomnia, the results obtained were that there was a relationship between the length of work and the occurrence of insomnia where there were 5 respondents who played gadgets for more than 4 hours but did not experience insomnia.

This study is also in line with research conducted by Yusnitasari.A, et al (2022) which states that the duration of social media use can affect the incidence of insomnia, namely the higher the duration of social media use, the higher the incidence of insomnia in adolescents, because currently various social media are equipped with attractive features so that they become an attraction for adolescents to use. The advantages of using social media among adolescents are as a place to find useful information, easy communication media, expanding friendship networks, a place to share photos, information, a good and cheap place for promotion. However, social media also has negative impacts such as internet addiction such as social media, online games that can interfere with adolescent learning activities and cause sleep disorders or insomnia.

CONCLUSION

Based on the results of this study regarding the relationship between gadget use and insomnia in students at Junior High School Betzata ABD Leilem, it can be concluded that:

1. Most respondents often use gadgets, namely 46 respondents.
2. Most of the respondents experienced insomnia, namely 35 respondents.
3. There is a relationship between gadget use and the incidence of insomnia

REFERENCES

Arifin. (2015). Factors Affecting Sleep Disorders. Surabaya: Cipta

- Danadri. (2011). *Tips for Success in Socializing*. Jakarta: UPN Veteran.
- Darajat. (2009). *Getting to Know the Causes and Effects of Insomnia Therapy Methods*. Yogyakarta: Flash Books.
- Dharma. (2011). *Nursing Research Methodology: Guide to Implementing and Applying Results*. Jakarta: Trans InfoMedia.
- Hidayat. (2017). *Nursing Research*. Jakarta: Salemba Medika.
- Hudo., Larrisa. 2015. Gadgets Disturb Teenagers' Sleep Time. Lifestyle article sindonews. (<https://lifestyle.sindonews.com>). Accessed on October 18, 2016, Time: 11.22 WITA.
- I Gede Purnawinadi, & Sali, S. (2020). Duration of Social Media Use and Insomnia in Adolescents. *KLABAT JOURNAL OF NURSING*, 2(1), 37–43. <http://ejournal.unklab.ac.id/index.php/kjn>
- Jahja. (2012). *Sleep Patterns of Adolescents Suffering from Insomnia*. Yogyakarta: Nusa Medika.
- Ministry of Communication and Informatics of the Republic of Indonesia. 2014. Internet Usage in Indonesia Reaches 82 Million. Ministry News Article. (https://kominfo.go.id/index.php/content/detail/3980/Kemkominfo%3A+Pengguna+Internet+di+Indonesia+Capai+82+Juta/0/berita_satker). Accessed on October 16, 2016, Time: 21.10 WITA.
- Kharisma Bismi Alrasheed, & Aprianti, M. 2011. The Relationship Between Gadget Addiction and Emotional Intelligence in Adolescents (A Study of Junior High School Students in Setiabudi District, South Jakarta). *Journal of Psychological Science*, 7(2), 136–142.
- Indonesian Child Protection Commission. 2020. Results of the Survey on the Fulfillment of Children's Rights and Protection during the Covid-19 Pandemic. [online]. bankdata.kpai.go.id.
- Laniwaty. (2008). *Insomnia Sleep Disorders*. Bandung: Sinar Baru Algesindo.
- Moh.Saifullah, (2017). *The Relationship between Gadget Use and Sleep Patterns in School Children at UPT SDN Gadingrejo II Pasuruan*. Nursing Education Study Program, FKUAirlangga Surabaya. Thesis.
- Notoatmodjo. (2010). *Health Research Methodology*. Jakarta: Rineka.
- Nevid. (2008). *Need rest And Sleep In Teenagers*.<http://kebutuhan.tidur.remaja.doc/id>. Accessed April 29, 2018.
- Rafknowledge. (2009). *Insomnia and Other Sleep Disorders*. Jakarta: PT. Elex Media Komputindo.
- Rideout. (2016). *Impact on School Students Playing Gadgets Too Long*. Bandung: EGC.
- Rumini & Sundari. (2008). *Let's Wake Up Fit Because of Proper Sleep*. Jakarta: Mirzan.
- Rheza, Maulana Okta. 2022. *The Relationship between Sleep Disorders and Emotional and Behavioral Disorders in Adolescents During the Covid-19 Pandemic in Urban and Rural Areas*. Thesis. University of Indonesia
- Salsabila. (2010). *Teenagers' Needs Increasing Rapidly Due to Gadgets*. Surabaya: Airlangga.

- Stepanski. (2009). Insomnia Sufferers Are Quite Large.<http://sufferersinsomnia-yang-cukup-besar.com>. Accessed on April 20, 2018.
- Santrock. (2009). *Overcome Insomnia With Therapy*.<http://publikasiilmiah.ums.ac.id/jurnal>. Accessed April 1, 2018.
- Sigman. (2009). *Psychology of Learning*. Bandung: Rajawali Pres
- Starburger. (2008). Health Disorders When Insomnia is Left and Considered Normal.<http://tribunews/kesehatan/2008/gangguan-kesehatanwhen-insomnia-is-left-and-considered-normal>. Accessed on 18
- Syamsoedin, K. 2014. The Relationship between the Duration of Social Media Use and Insomnia Activities in Adolescents at SMA N 9 Manado. (ejournal.unsrat.ac.id/index.php/jkp/artic1e)
- Syamsoedin, W., Bidjuni, H., & Wowiling, F. (2015). The Relationship Between the Duration of Social Media Use and the Incidence of Insomnia in Adolescents at State Senior High School 9 Manado. *UNSRAT Nursing Journal*, 3(1), 113617.
- Sugiyono. (2009). *Quantitative Nursing Research Methods*. Bandung: CV Alfa Beta.
- Syamsoedin, W., Bidjuni, H., & Wowiling, F. (2015). The Relationship Between the Duration of Social Media Use and Insomnia Incidence in Adolescents at State Senior High School 9 Manado. *UNSRAT Nursing Journal*, 3(1), 113617.
- Tamil selvan, P, Kousalya V. Kumar, Preethi, M, Ragukumar, Divya & Bharathi Palanisamy. (2021). Effects of Excessive Usage of Electronic Gadgets during COVID-19 Lockdown on Health of College Students: An Online Cross-Sectional Study. *Asian Journal of Pharmaceutical Research and Health Care*, 13(2), 1-9.
- Thalib. (2010). *Educational Psychology Based on Applied Empirical Analysis*. Jakarta: Kencana
- Utami. (2009). *Self-Concept in Teaching and Learning*. Jakarta: Atmajaya University Research Center.
- Omega, T. (2017). The Relationship Between Length of Gadget Use and Insomnia in Students at SMA Negeri I Kawakoan.<http://media.neliti.com>. Accessed January 15, 2018.
- Yusnitasari.A, Ramadhani.A, Hisan.K. 2022. Gadget Use with Insomnia Incidence in Adolescents: Cross-sectional Study on High School Students in Urban and Rural Areas. *Indonesian Journal of Health Promotion Publication Media (The Indonesian Journal of Health Promotion)*

Relationship Between Duration of Gadget Use and Insomnia Incidence in Adolescents at Junior High School Betzata ABD Leilem

ORIGINALITY REPORT

24%

SIMILARITY INDEX

19%

INTERNET SOURCES

13%

PUBLICATIONS

10%

STUDENT PAPERS

PRIMARY SOURCES

1	journal.unj.ac.id Internet Source	2%
2	Submitted to Universitas Sumatera Utara Student Paper	2%
3	www.researchgate.net Internet Source	1%
4	eprints.poltekkesjogja.ac.id Internet Source	1%
5	jmk.stikesmitrakeluarga.ac.id Internet Source	1%
6	media.neliti.com Internet Source	1%
7	www.worldwidejournals.com Internet Source	1%
8	Debora Paninsari, Cecilia Arnas B Harefa, Gebby S. A. Tarigan, Yenti Kusnani Duha, Minda Silvia S. Hasibuan, Chiou Feng Lin. "The	1%

Relationship between the Frequency of Baby Massage and the Pattern of Defecation of Babies who are Exclusively Breastfed at Bunda Patimah Primary Clinic", STRADA Jurnal Ilmiah Kesehatan, 2022

Publication

9	jurnal.academiacenter.org Internet Source	1 %
10	sjik.org Internet Source	1 %
11	al-kindipublisher.com Internet Source	1 %
12	journal.arikesi.or.id Internet Source	1 %
13	www.bestiepaws.com Internet Source	1 %
14	discovery.researcher.life Internet Source	1 %
15	Submitted to University of Bradford Student Paper	1 %
16	Cory Febrina, Rina Mariyana. "Gadget's Addiction Scale: An Adolescents Analytic Survey", Asian Community Health Nursing Research, 2021 Publication	<1 %

Submitted to Syiah Kuala University

17

Student Paper

<1 %

18

Aliza Shavela, Mariani. "The Association between Body Fat Percentage and Incidence of Prehypertension among Medical Student", Sriwijaya Journal of Medicine, 2020

Publication

<1 %

19

doaj.org

Internet Source

<1 %

20

Submitted to Midlands State University

Student Paper

<1 %

21

Maximiano Oqui, Ning Arti Wulandari, Tonãlio de Fãĩtima dos Santos, Ana do Rosãĩrio de Jesus Leite. "Knowledge about The Dangers of Smoking and Smoking Behavior of Students in Setembro Unamet 4th High school Dili, Timor Leste", Jurnal Ners dan Kebidanan (Journal of Ners and Midwifery), 2022

Publication

<1 %

22

garuda.kemdikbud.go.id

Internet Source

<1 %

23

www.journalmpci.com

Internet Source

<1 %

24

Submitted to American Public University System

Student Paper

<1 %

25	Submitted to University of Maryland, Global Campus Student Paper	<1 %
26	www.fastercapital.com Internet Source	<1 %
27	Submitted to Fort Pierce Westwood High School Student Paper	<1 %
28	Liliana Inggrit Wijaya, Zunairoh Zunairoh, Andri Rianawati, Vincentius Riandaru Prasetyo, Indro Harianto. "Does Financial Technology Matter? Evidence from the Indonesia Healthcare Industry During the Covid-19 Pandemic", Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration, 2022 Publication	<1 %
29	opengovasia.com Internet Source	<1 %
30	Submitted to Cochise College Student Paper	<1 %
31	Submitted to Dr. V.N. Bedekar Institute of Management Studies Student Paper	<1 %
32	Submitted to South Birmingham College Student Paper	<1 %

33	www.frontiersin.org Internet Source	<1 %
34	jppipa.unram.ac.id Internet Source	<1 %
35	repository.ubharajaya.ac.id Internet Source	<1 %
36	Elly Malihah, Vina Adriany, Tutin Aryanti, Hani Yulindrasari. "Research for Social Justice", Routledge, 2019 Publication	<1 %
37	jurnal.utu.ac.id Internet Source	<1 %
38	repository.uin-malang.ac.id Internet Source	<1 %
39	www.ssbfn.net Internet Source	<1 %
40	Grujanac, Mara Paich. "How does Internet Facilitated Communication impact teacher and parent partnerships?", Proquest, 20111109 Publication	<1 %
41	fastercapital.com Internet Source	<1 %
42	journal.jptranstech.or.id Internet Source	<1 %

43	jurnal.pkr.ac.id Internet Source	<1 %
44	www.studymode.com Internet Source	<1 %
45	Lasiyati Yuswo Yani. "ANALYSIS OF FACTORS ASSOCIATED WITH THE IMPLEMENTATION OF SEX EDUCATION AMONG ELEMENTARY SCHOOL CHILDREN IN RURAL AREAS", Journal for Quality in Women's Health, 2024 Publication	<1 %
46	Nadifah Adya, Mahisha Mutharrif Laila, Muhammad Aditia Syauqi, Mohammad Ardy Audya Armadhana, Anusua Ghosh. "Impact of Intense Social Media Usage on Sleeping Pattern", Bulletin of Social Informatics Theory and Application, 2022 Publication	<1 %
47	Poorandokht Afshari, Marzieh Rakhsh Khorshid, Mahdis Vakili, Maryam Jahandideh, Mehrnaz Ahmadi. "Children's Idea about Cigarettes and Smoking", Jundishapur Journal of Chronic Disease Care, 2016 Publication	<1 %
48	globalowls.com Internet Source	<1 %
49	journal.ipb.ac.id Internet Source	<1 %

50 journal.um-surabaya.ac.id <1 %
Internet Source

51 mail.ijels.com <1 %
Internet Source

52 perpustakaan.fk.ui.ac.id <1 %
Internet Source

53 www.coursehero.com <1 %
Internet Source

54 www.ncbi.nlm.nih.gov <1 %
Internet Source

Exclude quotes On

Exclude matches Off

Exclude bibliography On

Relationship Between Duration of Gadget Use and Insomnia Incidence in Adolescents at Junior High School Betzata ABD Leilem

GRADEMARK REPORT

FINAL GRADE

GENERAL COMMENTS

/0

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12