

Relationship Intensity of Social Media Use With Quality of Sleep, Social Interaction, and Self-Esteem In Urban Adolescents In Surabaya

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ABSTRACT

Background: Social media users in Indonesia are dominated by adolescents and users in big city areas. The use of social media in high intensity can affect sleep quality, social interactions, and self-esteem in adolescents. This study aimed to determine the relationship between the intensity of social media use and the quality of sleep, social interaction, and self-esteem of urban adolescents. **Method:** Cross sectional study design. The sample was 141 students and was taken using total sampling technique. The independent variable in this study was the intensity of social media use while the dependent variable was sleep quality, social interaction, and self-esteem. Collecting data using online questionnaires (google form) and analyzed using Spearman rho with a significance level of $\alpha = 0.05$. **Results:** The relationship between the intensity of social media use was significant with sleep quality ($p = 0.000$; $r = -0.459$), social interaction ($p = 0.000$; $r = -0.348$), and self-esteem ($p = 0.001$; $r = -0.286$) at urban adolescents in Surabaya. **Discussion:** The use of social media in adolescents needs to be addressed wisely because it can be a factor in causing poor sleep quality, social anxiety and low self-esteem if used excessively.

Keywords: intensity of social media use, sleep quality, social interaction, self-esteem, urban adolescents

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INTRODUCTION

Nowadays, social media users have mastered various groups, from children to the elderly. Social media users in Indonesia are dominated by adolescents and users in big city areas such as Jakarta and Surabaya [1]. Adolescents are the most productive people in the use of social media because they can express themselves, socialize involved in society, increase creativity, and add new skills through social media [1]. Moreover, Most of the adolescents interact with their social media accounts more often than interact with the people around them. Ease of socializing with social media, making anti-social in real life. Meanwhile, the use of cellphones in adolescents is not only a medium of communication but is also closely related to lifestyle, prestige, confidence, and luxury [2]. The other research showed Smartphone Use Disorder was linked to WhatsApp Use Disorder, and to a lesser extent, to Facebook Use Disorder. Associations between SUD and WhatsApp Use Disorder were most strongly pronounced in females. Additionally, FoMo predicted SUD, WhatsApp, Facebook Use Disorder, and (fully) mediated the relationship between life satisfaction and those variables [3]. It was also confirm that WhatsApp was the most accessed site and indicated that nocturnal technology use has a weak, negative impact on tertiary students' quantity of sleep that may lead to daytime sleepiness[4].

Excessive use of social media can affect physical and psychological aspects [5]. One of the physical aspects is sleep. Sleep is a basic human need that must be met properly. If the need for sleep is not met properly, it will have an influence on others [6]. The negative impact of using social media is the reduction in direct or face-to-face social interactions, the emergence of addiction to social media, and ethical and legal issues due to content that violates morals, privacy and regulations [7]. The use of social media also affects a person's

self-esteem, individuals with high self-esteem will use social media as entertaining content, promote products or services, and others[8]. Meanwhile, individuals with low self-esteem become an outlet so they don't feel alone. Research conducted by Eric Einbinder (2017) showed that the use of social media can result in self-esteem in adolescents due to cyberbullying where adolescents harass each other both at home and at school[9]. This is also reinforced by the research of Dewi Kurniawati (2018) which explains that one of the negative impacts of using social media is the social aspect with an increase in cyber bullying among adolescents[10]. The interesting results study showed that most teenagers do cyberbullying to their friends because of the motive of having fun. Another motive is express upset feeling, and fighting back[11]. Moreover, the adolescent who had smartphone addiction were more likely to have significant symptoms of depression, anxiety, ADHD, and to use tobacco and alcohol compared to those in the normal group [12].

Adolescents with the highest social media users in the world are 13-17 years old with a percentage of 56%. Adolescents use social media several times a day and even continuously [13]. The report from the Indonesian Internet Service Providers Association (APJII, 2017) states that internet users in Indonesia are increasing every year. Total internet users are 143.26 million people or 54% of the total population in Indonesia. The use of internet or social media in urban areas is higher than in rural-urban and rural areas. In urban areas it is 72, 41%, rural-urban 49, 49%, and in rural areas it is 48.25% (APJII, 2017) [14].

Excessive use of social media, especially at night will disrupt the sleep process in adolescents. Poor sleep quality causes physiological balance disorders such as decreased daily activities, feeling tired, weak, and decreased endurance. Most of the adolescents interact with their social media accounts

more often than they interact with the people around them. The higher the intensity of social media use causes a decrease in sleep quality, depression, low self-esteem and anxiety but has not linked this to social interactions [5]. According to research from (Utomo & Budi, 2015) on social interaction patterns in student gadget users, it illustrates that the forms of social interaction that occur using gadgets can be two, namely the associative process and the dissociative process [15]. In addition, excessive social media use increase the risk of problematic social media use, which can causes impaired mental health such as anxiety and social media fatigue heading to depressive symptoms[17]. Therefore, research related to the relationship of social media use with sleep quality, social interaction, and self-esteem of adolescents living in urban areas is important.

METHOD

This study used a cross sectional study. The population were 447 class X and XI adolescents. In addition, the inclusion criteria were students aged 15-18 years who used social media. The sample was 141 respondents.

The independent variable in this study was the intensity of social media use while the dependent variables in this study were sleep quality, social interaction, and self-esteem.

The questionnaire on the intensity of social media use uses the SONTUS (Social Networking Time Use Scale) questionnaire. This questionnaire consists of 29 questions with a scale of 11 time category scales, but researchers modified this questionnaire to suit the research respondents, namely adolescents because researchers used this questionnaire for respondents in the past. final student. The modified questionnaire consisted of 15 question items with 11 time category scales to ask for frequency of use and engagement with social media. This questionnaire has been translated by

previous researchers from English to Indonesian by means of expert validation, back-translation, and pre-testing.

The sleep quality questionnaire used the PSQI (The Pittsburgh Sleep Quality Index). The PSQI consists of 9 questions with 7 components, namely sleep latency, sleep duration, sleep quality, efficiency of sleep habits, sleep disturbances, the use of sleeping pills, and impaired body function on a day-to-day basis.

The social interaction questionnaire uses the SIAS (Social Interaction Anxiety Scale) measurement tool which consists of several dimensions according to Mattick & Clarke (1998). This instrument contains 20 questions of which there are 4 positive questions and 14 negative questions

The self-esteem questionnaire uses the Rosenberg's Self Esteem Scale (RSES) questionnaire compiled by Rosenberg and has been modified into Indonesian by (Fitra, 2015) which is then modified again by researchers to suit current research. This measuring instrument consists of 10 items with an assessment using a Likert scale with 4 alternative choices of answers "Strongly Agree", "Disagree" and "Strongly Disagree". This study uses the Spearman correlation test to determine the correlation of the independent and dependent variables. Furthermore, This research has been declared ethical by the Health Research Ethics Commission of Airlangga University with the code of ethics certificate number 1511-KEPK.

RESULTS

1. Demographic Characteristics

This research was conducted in private senior high schools that were accredited A. School regulations allow students to bring mobile phone to school. This makes the intensity of accessing students' social media more frequent.

Table 1. Distribution of respondent demographic data

No	Variable	Category	f (N=141)	%
1	Age	15 years	10	7,1
		16 years	32	22,7
		17 years	82	58,2
		18 years	17	12,1
2	Gender	Male	89	63,1
		Female	52	36,9
3	Frequently used social media	Instgaram	88	62,4
		Youtube	33	23,4
		Twitter	9	6,4
		Facebook	10	7,1
		Path	1	0,7
4	Duration of use of social media in a day	<1 hour	13	9,2
		1-2 j hours	27	27,0
		3-4 hours	50	35,5
		5-6 hours	22	15,6
		>7 hours	18	12,8
5	Gadgets for accessing social media	Mobile phone	139	98,6
		Laptop	2	1,4
6	Data package used for one month for mobile phone (IDR)	0	2	1,4
		<50.000	64	45,4
		<100.000	60	42,6
		>100.000	15	10,6
7	The cost used for one month for the internet package on the laptop	0	139	98,6
		<50.000	1	0,7

<100.000	1	0,7
>100.000	0	0

Table 1 provides information that more than half of the respondents were 17 years old. Respondents with the highest gender were female respondents as much as 63.1%. In addition, more than half of respondents access Instagram the most. The highest duration of social media usage is 3-4 hours with a percentage of 35.5%. Moreover, almost all respondents use mobile phone to access social media. Additionally, the most

data packages that respondents spend one month on mobile phones are less than IDR 50,000 and almost all respondents do not pay for internet packages on laptops.

2. Social Media Use Intensity, Sleep Quality, Social Interaction, and Self-Esteem in Adolescents

Table 2. Social Media Use Intensity, Sleep Quality, Social Interaction, and Self-Esteem in Adolescents.

No	Variable	Category	Frequency	(%)
1	Intensity of social media use	Low	36	25,5
		Average	29	20,6
		High	47	33,3
		Very high	29	20,6
		Total	141	100
2	Sleep Quality	Poor	83	58,9
		Good	58	41,1
		Total	141	100
3	Social Interaction	Social Anxiety	75	53,2
		Sosial Fobia	66	46,8
		Total	141	100
4	Self-esteem	Low	72	51,1
		High	69	48,9
		Total	141	100

Table 2 shows that one third of respondents access social media with high intensity. in addition, more than half of the respondents had poor sleep quality. Respondents also experienced social interaction disorders in the form of social anxiety as much as 53.2%. Moreover, 51.1% of respondents have low self-esteem.

3. The Relationship between Social Media Intensity and Sleep Quality in Urban Adolescents

Table 3 The Relationship between Social Media Intensity and Sleep Quality in Urban Adolescents

Intensity of social media use	Sleep Quality				Total	
	Poor		Good		Σ	%
	f	%	f	%		
Low	4	2,8	32	22,7	36	25,5
Average	20	14,2	9	6,4	29	20,6
High	38	27,0	9	6,4	47	33,3
Very high	21	14,9	8	5,7	29	20,6
Total	83	58,9	58	41,1	141	100

Spearman p = 0,000
Correlation coefficient (r)=-0,459

Table 3 shows that 27% of respondents with high intensity of social media use have poor sleep quality. In addition, the results of the Spearman statistical test showed a value of p = 0.000. It can be concluded that there is a relationship between the intensity of social media use and the quality of sleep in urban adolescents and the value of r = -0.459 which means that it has sufficient and unidirectional correlation strength. If the

intensity of social media use was high, sleep quality decreases.

4. The Relationship between Intensity of Social Media Use and Social Interaction of Urban Adolescents

Table 4 The Relationship between Intensity of Social Media Use and Social Interaction Of Urban Adolescents

Intensity of social media use	Social Interaction				Total	
	Social Anxiety		Social Phobia		Σ	%
	f	%	f	%		
Low	5	3,5	31	22,0	36	25,5
Average	20	14,2	9	6,4	29	20,6
High	31	22,0	16	11,3	47	33,3

Very High	19	13,5	10	7,1	29	20,6
Total	75	53,2	66	46,8	141	100
<i>Spearman p = 0,000</i>						
Correlation coefficient (r)=-0,348						

Table 5.4 shows that almost one-sixth of respondents had high intensity of social media use have social anxiety. In addition, the results of the Spearman data analysis show the value of $p = 0.000$, which means that there was a relationship between the intensity of social media use and social interaction among urban adolescents and the value of $r = -0.343$ which shows the strength of the correlation was weak and unidirectional so that

if the intensity of social media use was high, the interaction social decline.

5. The Relationship between Social Media Intensity and Self-Esteem in Urban Adolescents

Table 5 The Relationship between Social Media Intensity and Self-Esteem in Urban Adolescents

Intensity of social media use	Self-Esteem				Total	
	Low		High		Σ	%
	f	%	f	%		
Low	5	3,5	31	22,0	36	25,4
Average	20	14,2	9	6,4	29	20,6
High	31	22,0	16	11,3	47	33,3
Very High	16	11,3	13	9,2	29	20,6
Total	72	51,1	69	48,9	141	100
<i>Spearman p = 0,001</i>						
Correlation coefficient (r)=-0,268						

Table 5 shows that 22% of respondents use social media with high intensity and have low self-esteem. In addition, the results of data analysis using the Spearman statistical test show that the value of $p = 0.001$ means that there was a relationship between the intensity of social media use and social interaction among urban adolescents. Meanwhile, the value of $r = -0.268$ which means it has a weak and unidirectional correlation strength so that if the intensity of use of social media is high, so self-esteem decreases.

DISCUSSION

The Relationship between Social Media Intensity and Sleep Quality in Urban Adolescents

The research showed that there was a relationship between the intensity of social media use and sleep quality. The higher the use of social media such as Instagram, Youtube, Twitter, Facebook and Path, the worse the sleep quality. The results of this study are reinforced by research by Woods & Scott (2016) which states that social media use is strongly associated with poor sleep quality and that use of social media at night is more strongly associated with poor sleep. In addition, social media use while going to sleep can interfere with the production of the hormone melatonin through exposure from handphone screens[5]. Research from Levenson, Shensa, Sidani, Colditz, & Primack, (2016) reveals several principles that underlie the relationship between social media use and sleep disorders. The use of social media will replace sleep when someone is still playing or accessing social media Instagram, Facebook, Twitter so that sleep time is reduced. in addition, the use of social media can improve emotional, cognitive and physiological. The results of the study also found that light or radiation emitted by social media devices can disrupt circadian rhythms [18]. This study is also in line with the results of research by Syamsoedin, Hendro, & Ferdinand (2015) which states that there is a relationship between the duration of social media use and insomnia in adolescents. The higher the duration of social media use, the higher the

incidence of insomnia in adolescents. The use of social media cannot be separated from the means of supporting these activities, such as computers, laptops, tablets, and cell phones or gadgets [19]. Additionally, the internet addiction can cause unfulfilled hours of sleep, which if left unchecked will lead to disturbed sleep patterns often called insomnia [16].

There are several factors that affect a person's sleep, one of which is lifestyle[6]. The lifestyle of teenagers today is inseparable from gadgets that cause them to use social media all the time. The sleep process is disturbed due to teenagers focusing on playing social media late into the night and still ignoring notifications from social media when teens start sleeping. The high intensity of social media use in adolescents directly leads to poor sleep quality. Sleep quality is an individual's ability to stay asleep and get the right amount of NREM and REM sleep. The signs of a good quality sleep are calm sleep, fresh when you wake up in the morning and enthusiasm for activities. Sleep quality greatly affects overall health and quality of life [19]. The other research also confirm that the quality of life is predominantly influenced by sleep quality[20].

Various kinds of social media applications are able to attract attention from all circles including teenagers. These applications are Instagram, Youtube, Twitter, Facebook, Path, and others. All of these applications are owned by teenagers. Teenagers access social media using cellphones, which each month they fill their quota. Based on the results of the research, adolescents spent a quota package of IDR 50,000 and some respondents spent a quota of more than IDR 100,000 in one month. Unlimited social media access and always fulfilling quotas make users enjoy various kinds of things on social media without paying attention to other activities such as neglected sleep time so that their sleep quality becomes poor.

The Relationship between Social Media Intensity and Social Interaction

Social interaction is the relationship between individuals or groups in a community that can form social status [21]. Social interaction is a human need for society and the need for action through relationships between individuals and other individuals or groups that can influence, change, or improve behavior [22]. The interaction process is based on various factors, namely imitation, suggestion, identification and sympathy processes. Meanwhile, interactions with the outside world through print and electronic media including social media can form new attitudes even though there are other factors that also influence, such as: selectivity, the choice, and interests[23]. School has a great influence on adolescents because school is the second environment after home where teenagers do many activities and build social relationships with their friends [24].

The results showed that there was a relationship between the intensity of social media use and social interaction among urban adolescents in Surabaya. In addition, the results of filling out the questionnaire show that most respondents who use social media at high intensity experience social anxiety. Respondents also prefer to interact via social media rather than interact face-to-face directly. Meanwhile, respondents with high intensity use of social media were mostly experienced by women compared to men. Almost all of the female respondents use social media in high intensity. This research is in line with Maentinigsih's research in (Syamsuodin et al., 2015) which states that female adolescents have more desire to interact socially through social media rather than face to face directly. This study is also in line with the other research which found that the intensity of smartphone use affects social interaction among students so that the use of smartphones to access social media affects student social interactions. This is because the interaction using a smartphone is easier, faster and more comfortable to interact compared to directly meeting each other's activities and activities. In addition, respondents feel that social interactions that are carried out using smartphones also have no limitations on time and distance[25].

The results of this study also show that most social media users with high intensity cause respondents to have high social anxiety as well. Environmental factors that influence social interaction are not only due to the intensity of social media use, the role of parents also contributes to social interactions. If parents do not teach children to interact socially and increase self-confidence, it will cause children to experience poor social interactions. Individuals with less social interaction have some symptoms such as avoiding strangers, preferring to play social media over interacting with other people, and nervous when talking to many people.

Communication through social media has decreased the quality and quantity of face-to-face communication. Students in everyday life cannot be separated from gadgets so that students access social media whenever and wherever. The availability of various kinds of social media makes adolescent behavior change. When teenagers are hanging out with their friends, it will often be seen that they are more engaged in playing social media regardless of their surroundings. So that the habit of reprimanding greetings and joking with friends is reduced.

Relationship between the intensity of the use of social media and self-esteem in urban adolescents

The results showed that there was a relationship between the intensity of social media use and self-esteem in urban adolescents in Surabaya. This research is in line with research Simatupang (2011) which discusses the intensity of the use of the Facebook social networking site with self-esteem in Vocational High School students who found that there is a relationship or linkage between the intensity of the use of the social networking site Facebook and self-esteem. in adolescents although the correlation is weak [26]. The results of the research above are also strengthened by the results of research conducted by Eric Einbinder (2017) which states that there is a strong relationship between the use of social media and self-esteem and shows a positive relationship. If someone frequently uses social media it can cause low self-esteem [9]. Self-esteem is satisfaction with oneself and the trust that is in a person [27]. The factors that affect self-esteem are influenced by internal and external environmental factors. Internal factors consist of gender, intelligence, physical condition. women always feel that their self-esteem is lower than men, tend to have less self-confidence, feel inadequate, and feel they must be protected. meanwhile, intelligence is closely related to academic achievement. Individuals who have high self-esteem will tend to have high academic achievement and vice versa. In addition, individuals with physically attractive conditions have higher self-esteem and are better off than those with physically less attractive conditions [28].

There are also external factors that affect adolescent self-confidence, namely: the family environment. The role of the family plays an important role in determining the development of self-esteem for individuals. Individuals will have high self-esteem if they are treated fairly, given equal opportunities, and educated democratically. Another external factor is the social environment where in this social environment the formation of self-esteem begins, the individual feels himself valuable or not. This is the result of the process of the environment, appreciation, acceptance, and treatment of others to them [29]

Social media is an external environment that can have positive and negative impacts on adolescents. This Is Due To Social Comparisons When Adolescents Access Social Media Such As Better Appearance Than Other Social Media Users, Comments Given, And Likes Given By Other Social Media Users. This Will Reduce Individual Self-Esteem If Responded Negatively.

CONCLUSION

The Intensity Of Social Media Use Is Related To Sleep Quality, Social Interaction, And Self-Esteem Of Urban Adolescents In Surabaya. The Higher The Intensity Of Social Media Use, The Lower The Quality Of Sleep, Social Interactions, And Self-Esteem In Adolescents. Therefore, Good Supervision From Parents, Teachers, And The Surrounding Environment Is Needed To Help Adolescents Use Social Media Wisely.

REFERENCES

1. P. Y. Hariyanto, "Literasi Media Di Kalangan Remaja Kota Dalam Penggunaan Media Sosial," Pp. 1–13, 2015.
2. E. Usni, H. Daulay, R. Manurung, R. Ismail, And H. Sitorus, "The Signification Of Cell Phones From A Lifestyle Perspective Among Teenagers In Medan City, Indonesia," *Int. J. Civ. Eng. Technol.*, Vol. 9, No. 10, Pp.

- 1900–1909, 2018.
3. P. Sha, R. Sariyska, R. Riedl, B. Lachmann, And C. Montag, “Addictive Behaviors Reports Linking Internet Communication And Smartphone Use Disorder By Taking A Closer Look At The Facebook And Whatsapp Applications ☆,” *Addict. Behav. Reports*, No. November, P. 100148, 2018. <https://doi.org/10.1016/j.abrep.2018.100148>
 4. A. M. A. Nasirudeen, L. Lee, C. Adeline, K. Wat, And N. Josephine, “Digital Impact Of Social Media Usage On Daytime Sleepiness : A Study In A Sample Of Tertiary Students In Singapore,” Vol. 3, Pp. 1–9, 2017. <https://doi.org/10.1177%2F2055207617699766>
 5. H. C. Woods And H. Scott, “#Sleepyteens: Social Media Use In Adolescence Is Associated With Poor Sleep Quality, Anxiety, Depression And Low Self-Esteem,” *J. Adolesc.*, Vol. 51, Pp. 41–49, 2016. <https://doi.org/10.1016/j.adolescence.2016.05.008>
 6. Perry & Potter, *Fundamental Keperawatan 7 Th Ed*. Jakarta: Salemba Medika, 2010.
 7. Indonesian Ministry Of Trade Public Relations Center Team, *Panduan Optimalisasi Sosial Media Untuk Kementerian Perdagangan Ri*. 2014.
 8. Jody D. Barker, “Social Media And Self-Esteem : The Relationship Of Social Media Usage And Self-Esteem Jody Don Barker A Thesis Presented To The Faculty Of Arkansas State University In Partial Fulfillment Of The Requirements For The Degree Of Master Of Science In Mass Com,” No. December, 2018.
 9. Eric Einbinder, “The Relationship Between Social Media And Self-Esteem In Middle School Students By Eric Einbinder A Thesis Submitted To The School Of Graduate Studies , Research , And Innovation In Partial Fulfillment Of The Requirements For The Degree Masters Of Science,” No. May, 2017.
 10. D. Kurniawati, “The Impact Of Teenager Dependency To Social Media And The Anticipate Effort,” *Int. J. Sci. Technol. Res.*, Vol. 7, No. 6, Pp. 28–30, 2018.
 11. B. Hamuddin, S. Syahdan, F. Rahman, D. Rianita, And T. Derin, “Do They Truly Intend To Harm Their Friends? The Motives Beyond Cyberbullying Among University Students,” *Int. J. Cyber Behav. Psychol. Learn.*, Vol. 9, No. 4, Pp. 32–44, 2019.
 12. G. Psychiatry *Et Al*, “The Relationship Between Smartphone Addiction And Symptoms Of Depression , Anxiety, And Attention -Deficit / Hyperactivity In South Korean Adolescents,” *Ann. Gen. Psychiatry*, Pp. 1–8, 2019.
 13. A. R. Lee And J. Suzanne Horsley, “The Role Of Social Media On Positive Youth Development: An Analysis Of 4-H Facebook Page And 4-H’ers’ Positive Development,” *Child. Youth Serv. Rev.*, Vol. 77, No. April, Pp. 127–138, 2017. <https://doi.org/10.1016/j.childyouth.2017.04.014>
 14. Apjii, “Penetrasi Dan Perilaku Pengguna Internet Indonesia,” *Iinfografis Has. Surv.*, Pp. 1–39, 2017.
 15. C. B. Utomo And T. Budi, “Journal Of Educational Social Studies Pengguna Gadget Di Sma N 1 Semarang,” Vol. 4, No. 1, Pp. 1–5, 2015.
 16. L. R. Wabula, M. T. Umasugi, W. O. Nurlina, A. M. Nizar, R. Agus, And W. O. Nurlina, “The Relationship Between Internet Addiction And Insomnia In Student Class Ix,” *J. Ners*, Vol. 15, No. 2, Pp. 2017–2020, 2020. <http://dx.doi.org/10.20473/jn.v15i2.18943>
 17. A. Rahmawati, D. M. Fitriana, And R. N. Pradany, “Systematic Review A Systematic Review Of Excessive Social Media Use : Has It Really Affected Our Mental Health?,” *J. Ners*, Vol. 14, No. 3, Pp. 213–216, 2019. [http://dx.doi.org/10.20473/jn.v14i3\(si\).17061](http://dx.doi.org/10.20473/jn.v14i3(si).17061)
 18. J. C. Levenson, A. Shensa, J. E. Sidani, J. B. Colditz, And B. A. Primack, “The Association Between Social Media Use And Sleep Disturbance Among Young Adults,” *Prev. Med. (Baltim).*, Vol. 85, Pp. 36–41, 2016. <https://doi.org/10.1016/j.ypmed.2016.01.001>
 19. W. K. Syamsuedin, B. Hendro, And W. Ferdinand, “Hubungan Durasi Penggunaan Media Sosial Dengan Kejadian Insomnia Pada Remaja Di Sma Negeri 9 Manado,” *Ejournal Keperawatan (E-Kp)*, Vol. 3, Pp. 1–10, 2015.
 20. D. Mariani, R. A. Muzasti, And A. Thamrin, “The Relationship Between Quality Of Sleep And Quality Of Life Of Patients In Medan, Indonesia,” *Open Access Maced. J. Med. Sci.*, Vol. 7, No. 11, Pp. 1794–1797, 2019.
 21. Mubarak, *Ilmu Kesehatan Masyarakat*. Jakarta: Salemba Medika, 2009.
 22. Sunaryo, *Sosiologi Untuk Keperawatan*. Jakarta: Bumi Medika, 2014.
 23. U. D. Palallo, M. Syafar, R. Amiruddin, Indar, And A. Yani, “Effects Of Adolescent Attitudes On Forming Intention To Stop Smoking,” *Int. J. Innov. Technol. Explor. Eng.*, Vol. 9, No. 1, Pp. 1026–1030, 2019.
 24. Sarwono, *Psikologi Remaja*. Jakarta: Rajawali Pers, 2013.
 25. M. Bahri, Resnawati, And S. Musdalifah, “A Version Of Uncertainty Principle For Quaternion Linear Canonical Transform,” *Abstr. Appl. Anal.*, Vol. 2018, 2018.
 26. T. Simatupang, “Hubungan Antara Intensitas Penggunaan Situs Jejaring Sosial (Facebook) Dengan Harga Diri (Self-Esteem) Pada Siswa-Siswi Smk Negeri 1 Merangin – Jambi Tahun 2011 Penelitian Keperawatan Jiwa,” *Hub. Antara Intensitas Pengguna. Situs Jejaring Sos. Faceb. Dengan Harga Diri (Self Esteem) Pada Siswa-Siswi Smk Negeri 1 Merangin Jambi*, 2011.
 27. J. B. Kaplan, . “‘Aesthetic Self-Esteem’, Plastic Surgical Nursing,” No. 35(1). [Doi: 10.1097/Psn.0000000000000085](https://doi.org/10.1097/Psn.0000000000000085), 2015.
 28. F. Suzanti, R. A. Kuswardani, S. Rahayu, And A. Susanto, “Contribution Of Epiphytes On The Canopy Insect Population In Oil Palm Plantations In North Sumatera,” *Arpn J. Eng. Appl. Sci.*, Vol. 11, No. 11, Pp. 6982–6998, 2016.
 29. 2013) Ahmad Susanto, *Teori Belajar Dan Pembelajaran Di Sekolah Dasar*, (Jakarta: Kencana Prenada Media Group, “Hubungan Harga Diri Mahasiswa Dengan Kemampuan Aktualisasi Diri Dalam Proses Belajar Metode Seven Jump Di Program Studi Ilmu Keperawatan Uin Syarif Hidayatullah Jakarta Skripsi,” *Biomass Chem Eng* Vol. 49, No. 23–6, Pp. 22–23, 2015.